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AUTHOR	Abraham, Sameer; Chattopadhyay, Manas; Sullivan, Colleen; Mallory, Larry; Steiger, Darby Miller; Daft, Lynn; Arcos, Alyssa; Wilbraham, Brooke
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ABSTRACT

This report, authorized by the Food and Nutrition Service of the U.S. Department of Agriculture, contains information on the School Meals Initiative for Healthy Children (SMI), a reform of school-meals programs aimed at upgrading the nutritional content of school meals. The purpose of the study was to describe and evaluate: (1) overall implementation of the SMI; (2) key operational characteristics of school-meals programs at both the school district and state agency level; and (3) training and technical assistance associated with school-meals programs. Findings are based on data collected from self-administered mail surveys, supplemented by telephone interviews, from a nationally representative sample of school food directors in 2,038 school districts and from 50 state child nutrition agencies responsible for administrating school-meals programs. This first of three reports covers the 1997-98 school year. Key findings are summarized under the following broad topics: overall status of SMI implementation; procedures followed in implementing the SMI; impact of the SMI; the role of training and technical assistance; and the role of state child nutrition agencies. The report contains numerous tables and the survey instruments used for the data collection. (WFA)

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The Gallup Organization
Rockville, Maryland

PROMAR *International*
Alexandria, Virginia

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THE SCHOOL MEALS INITIATIVE IMPLEMENTATION STUDY

FIRST YEAR REPORT

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October 2000

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The Gallup Organization
Rockville, Maryland

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THE SCHOOL MEALS INITIATIVE IMPLEMENTATION STUDY

FIRST YEAR REPORT

Sameer Abraham
Manas Chattopadhyay
Colleen Sullivan
Larry Mallory
Darby Miller Steiger
The Gallup Organization

Lynn Daft
Alyssa Arcos
Brooke Wilbraham
PROMAR *International*

U.S. Department of Agriculture
Food and Nutrition Service

October 2000

SCHOOL MEALS INITIATIVE IMPLEMENTATION STUDY
FIRST YEAR REPORT

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Members of the Food and Nutrition Subcommittee of the Education Information Advisory Committee (EIAC) of the Council of Chief State School Officers reviewed drafts of the survey instruments and made several helpful suggestions.

The Office of Analysis and Evaluation of the Food and Nutrition Service of the US Department of Agriculture was responsible for oversight of the study. John Endahl, of this office, served as Contracting Office's Representative. In this capacity, he provided both administrative and professional direction to the study.

The study was directed by Sameer Abraham of The Gallup Organization with the assistance of Lynn Daft of PROMAR *International.* In addition to the overall supervision of the study, The Gallup Organization was chiefly responsible for sample design and selection and data collection. PROMAR *International*'s principal responsibilities were data analysis and preparation of the final report. Both organizations participated in development of the research plan and instrument development.

Several staff members of these organizations played important roles in the conduct of this study. They include Manas Chattopadyay, Larry Mallory, Darby Miller Steiger, and Colleen Sullivan of The Gallup Organization and Alyssa Arcos, Debra White, and Brooke Wilbraham of PROMAR *International.*

EXECUTIVE SUMMARY

Background

The National School Lunch Program (NSLP) and the School Breakfast Program (SBP) are central parts of a national policy designed to safeguard the nutritional well-being of the Nation's children. The programs are administered by the Food and Nutrition Service (FNS) of the United States Department of Agriculture (USDA), operating through State agencies (SAs) that have agreements with the local school systems in their States.

Despite the progress that has been achieved over the years in enhancing the quality of school meals, results of research conducted in the early 1990s indicated that school meals, on balance, were not meeting certain key nutritional goals. In late 1993, the USDA launched a far-reaching reform of the school meals programs, a reform aimed at upgrading the nutritional content of school meals. The several elements of this reform are collectively referred to as the School Meals Initiative for Healthy Children (SMI), the principal subject of this report.

Purpose of the Study

In September 1996, FNS contracted with The Gallup Organization, with the support of PROMAR *International*, to conduct a three-year study of USDA's school-based child nutrition programs. The study has three over-riding objectives. They are to describe and evaluate:

- Overall implementation of the School Meals Initiative for Healthy Children,
- key operational characteristics of the school meals programs at both the school district and State agency level, and
- training and technical assistance activities associated with the school meals programs.

Since this is the first national study following the start of the SMI, it serves as an initial progress report on implementation of the reform.

Methodology

This report is the first in a series of reports to be issued as part of a three-year study of the USDA's school-based child nutrition programs. The report findings are based on data collected from a nationally representative sample of school food authorities (SFAs) participating in the NSLP and from the 50 State child nutrition agencies responsible for administration of the program. Data were collected during School Year (SY) 1997/98 through use of self-administered mail surveys, supplemented by telephone interviews where necessary.

The database of public school districts maintained by Quality Education Data (QED) was used in drawing the sample. Two types of school districts represented in the QED database were found to be appropriate for inclusion in the study: (1) regular public school districts and (2) school districts administered by supervisory unions. While regular school districts are coterminous with SFAs, in the case of supervisory unions it was found that more than one district was served by an individual SFA. Given this difference, regular school districts and school districts in supervisory unions were sampled separately. A sample of 2,325 districts (2,225 regular school districts and 100 supervisory union districts) was drawn.

The sample frame for the regular school districts was stratified by two levels of poverty and by the seven FNS administrative regions. The sample of 2,225 regular school districts was allocated to the 14 strata in proportion to the number of school districts in each stratum. The frame for school districts in supervisory unions was stratified by poverty level only; the sample of 100 districts was allocated disproportionately to ensure sufficient representation of high poverty districts. Within each stratum, the sample was drawn with probability proportional to size (PPS), where size was defined as the square root of the number of students enrolled in a district.

Of the 2,325 districts in the overall sample, 2,251 (97%) qualified for inclusion in the study by their participation in the NSLP. Completed surveys were collected from 2,038 respondents, a response rate of 91%.

Findings

Key findings of the study are summarized here by the following topics, which correspond to chapters in the report:

- overall status of SMI implementation

- procedures followed in implementing SMI
- impact of the SMI
- the role of training and technical assistance
- the role of State child nutrition agencies

Overall Status of SMI Implementation

The SMI identifies four menu planning options that schools can use to meet the nutritional standards established by the USDA and the US Department of Health and Human Services in their *Dietary Guidelines for Americans*. The four menu planning options are Nutrient Standard Menu Planning (NSMP), Assisted Nutrient Standard Menu Planning (ANSMP), Enhanced Food-Based Menu Planning, and Traditional Food-Based Menu Planning. The purpose of this section is to determine how many school districts are using each of the menu planning systems, how far along they are in putting these systems in place, and their plans for completing the task. It should be noted that although the SMI began in School Year 1996/97, States were allowed to grant two-year waivers, so the SMI was not fully operational until School year 1998/99.

Use of menu planning systems

A large majority of all school districts (81%) and schools (74%) were found to be using one of the food-based menu planning systems with twice as many districts staying with the traditional system as with the enhanced (55% vs. 27%). About 20% of all districts were using NSMP while comparatively few districts (3%) were using ANSMP. About 6% of all districts are using more than one menu planning system in their schools, at least temporarily. Although very large school districts (enrollment of 25,000 or more) are more likely to use NSMP than are smaller districts, more than twice as many of the very large districts use a food-based approach as use NSMP.

Implementation Status

With the SMI in only its second year of operation, an impressive 35% of all districts reported that their chosen system of menu planning had been fully implemented with another 26% indicating that they were at least three-quarters implemented. On the basis of information collected by the FNS Regional Offices in SY 1996/97, it was reported that waivers had been

granted to at least one-third of all SFAs. By the time of this survey in SY 1997/98, only 7% of all districts said that they had not yet started implementing their chosen method.

Future Intentions Regarding the Adoption of NSMP

About half (51%) of those school districts using food-based systems in SY 1997/98 said that they were either working toward adoption of NSMP or planned to do so. This share was highest for elementary schools in mid-size districts (55%) and lowest for middle/secondary schools in the largest districts (32%).

Availability of Documentation

A variety of documentation is required for analyzing the nutritional content of school meals. This analysis is required of all schools, regardless of the menu planning system they use. While schools using food-based menu planning systems are not required to conduct nutrient analysis, the information is required by their State agencies when they conduct this analysis. Two-thirds or more of all districts report that a majority (11 of 17) of the documentation useful for purposes of conducting nutritional assessments are routinely available. The documentation that is most frequently not available is information on the number of a la carte, adult, and special meals served, which are required for conducting weighted analysis. While there is a statutory waiver for weighting until 2003, when the information is available, districts are encouraged to continue conducting weighted analysis.

Operational Procedures

Use of grade/age categories

To help match menus to the nutritional requirements of children of different ages, FNS has established different groupings for use by school districts using the new menu planning systems. The span from pre-kindergarten through 12th grade has been divided into four categories with the grade boundaries dependent on the menu planning system.

Survey results indicate that, in practice, districts use a far wider range of grade/age groupings than prescribed by USDA. It would appear that the vast majority of districts use groupings that differ from those specified in FNS guidelines, perhaps because most district schools are organized by different grade groupings and therefore find it difficult to use them for purposes of menu planning.

Nutritional Analysis

In addition to the ongoing nutritional analysis that is required of NSMP/ANSMP schools, one-third of the districts that are using food-based planning systems are conducting nutritional analysis. This means that nearly half of all districts (47%) are subjecting their menus to nutrient analysis. Of those districts conducting nutrient analysis, over three fourths conduct a weighted analysis weighting foods on the basis of their relative importance in reimbursable meals.

Most districts (83%) that are conducting nutritional analysis have had to re-analyze their menus, usually on a monthly basis. This has been necessary for a combination of reasons with "achievement of nutritional targets" most frequently cited followed by pursuit of an "incremental approach to accomplishing the targets" as the next most important.

Of the 15 software systems approved by FNS at the time of the survey, over 80% of all districts conducting computerized analysis were using one system: the NUTRIKIDS package from Lunch Byte Systems.

A significant share (38%) of those food-based districts that are conducting nutrient analysis are doing so by hand.

Assisted Nutrient Standard Menu Planning

Comparatively few school districts (3.4%) are using the ANSMP option. At the time of the survey, only 15 State agencies were actively providing ANSMP support. For those districts that are using ANSMP, the nutrient analysis is most frequently conducted by their State agency (35%), with analytic support also provided by food service management companies (18%), consultants (14%), and other school districts (14%).

Actions of Food-based Districts not Conducting Nutrient Analysis

For those school districts that do not have the benefit of nutritional analysis to guide their menu planning, achievement of the SMI nutritional objectives poses a special challenge. Survey results indicate that over 90% of these districts are taking a combination of actions to achieve the desired outcome. Among the actions taken are: the use of more nutritious preparation techniques (81%), offering additional servings of more nutritious foods (77%), and substituting more nutritious foods and ingredients (77%).

Publicizing the Nutrient Content of Menus

Most districts (83%) do not publicize the nutrient content of their menus, though a substantially larger share of NSMP/ANSMP districts do so compared to the others (36% vs. 12%). For those districts that publicize nutrient content, the most frequently used methods are postings and handouts aimed at students and parents.

Impact of the SMI

We begin by looking at the impacts of the SMI on only those schools that are using nutrient standard menu planning. This is followed by an appraisal of the impact of the SMI on all school districts, regardless of the menu planning system in use.

Impact of Nutrient Standard Menu Planning

Ease of implementation

There are a number of tasks to be performed in implementing nutrient standard menu planning. Most of the more demanding tasks are associated with the start-up phase though some continue beyond start-up. For 10 of the 14 tasks identified in the survey, a majority of the survey respondents characterized them as a "minor burden." The remaining four tasks were characterized by a majority of the school foodservice directors as a "major burden." The latter include: entering and analyzing recipes, obtaining missing nutrient information, entering and analyzing menus, and obtaining information for weighted analysis. It is noted that these tasks are core components of NSMP, though most of the work associated with the first three occurs during initial implementation. As noted above, the requirements for conducting weighted analysis have been held in abeyance until 2003. Thus, it is expected that the level of burden associated with nutrient standard menu planning will decline for most districts as implementation is achieved.

Ease of meeting nutritional objectives

About half of all school districts using nutrient standard menu planning report difficulty in meeting the total calories goal, both for lunch and breakfast. In terms of nutritional challenge, this is followed by about 45% of the districts reporting difficulty in meeting the percent of

calories from fat and saturated fat goals in their lunch menus. A substantially smaller share (25%) of the districts report difficulty in meeting these goals with their breakfast menus.

Comparatively few districts (16%) have gone the next step in establishing standards for carbohydrates, sodium, and cholesterol. For those that have, the standard for sodium is the most difficult to achieve with 40% reporting difficulty meeting it in their lunch menus.

Other impacts

For those districts using nutrient standard menu planning, 70 to 80% report that their menus are "somewhat different" than before SMI. Two-thirds (66%) of the NSMP/ANSMP districts report spending more time planning breakfast menus and over three-quarters (76%) spend more time planning lunch menus than before SMI. Again, for many districts, much of this additional time is thought to be associated with program start-up. Of course, to the extent districts change their menus, more menu planning time could be required in the future too.

Most of the NSMP/ANSMP districts report "no change" in a la carte sales, either in elementary schools (84%) or in middle/secondary schools (63%). To the extent school districts report a change in their a la carte sales, nearly all report increased sales. For all middle/secondary schools, 35% reported an increase while nearly half (49%) of all middle/secondary schools in the largest districts experienced increased a la carte sales.

Overall Impact of SMI on all School Districts

Ease of performing tasks

The vast majority of all school foodservice directors view the tasks required by SMI as not posing any major difficulty. Of 10 key tasks that all districts must execute, seven were viewed by a majority of districts as posing "no difficulty." The remaining three – adhering to standardized recipes, substituting nutritionally comparable foods, and documenting last minute substitutions – were found to present at least "some difficulty" to a majority of the districts. While a slight majority of directors said that the task of maintaining food production records provided "no difficulty," this was also the task most frequently cited (by 11% of directors) as being of "major difficulty."

Menu changes

Many school foodservice directors report making numerous changes in the menu-related features of their programs. This includes: increased number of fruit and vegetables offered (76% of all districts), increased number of new menu items (71%), increased portion sizes (54%), increased variation in menu items (42%), and an increased number of menu choices for reimbursable meals (36%).

Food procurement and preparation

Many school foodservice directors report making widespread changes in procurement and preparation practices as a result of SMI. For example, many report increased purchases of low-fat/reduced-fat foods (81%) and fresh fruits and vegetables (75%). In addition, most districts are requiring more information on nutrition from their vendors (84%) and are increasing their use of product specifications (70%).

Program costs

Over three-quarters (79%) of all districts report that their overall program costs have increased since implementation of the SMI, driven largely by increased food costs. Increased food costs are reported by a large majority of districts in all size and menu planning categories. Interestingly, a majority of districts in all menu planning categories (including NSMP) reported no change in administrative costs following implementation of the SMI, despite the fact that a majority of NSMP districts also reported spending more time planning menus.

Plate waste

To the extent plate waste was affected by the SMI, it appears to have been a positive impact. A majority of directors reported no change in food waste. However, to the extent there was change in the amount wasted, more respondents felt that there had been less waste rather than more (with the exception of cooked vegetables). NSMP districts performed slightly better than the others in terms of reducing waste.

Overall SMI performance and acceptance

School foodservice directors report that the SMI has generally had a neutral-to-positive impact on program performance. While a majority of all directors report "no change" in

performance, about 30 % report a positive impact on such measures as: program participation, student and adult acceptance, and the acceptability of menu choices.

School foodservice directors report that major stakeholders in the school meals program—students, parents, administrators, cooks, cashiers, financial staff, and kitchen managers—have a decidedly positive attitude toward the SMI. School foodservice directors themselves are strongly supportive with nearly 70% indicating a "somewhat positive" or "very positive" attitude toward the program. For those directors using NSMP or ANSMP, nearly 80% had a positive attitude toward the SMI.

The Role of Training and Technical Assistance

Familiarity with USDA training and technical assistance materials

School foodservice directors were asked about their familiarity with USDA training and technical assistance materials and, for the materials they were familiar with, their assessment of its value. At least two-thirds of all directors reported familiarity with 4 of 9 references identified in the survey. Of the school foodservice directors indicating familiarity with the materials, a large majority found them of "some use" while a significant minority found them "very useful".

Sources of training and technical assistance

While school districts receive training and technical assistance related to their food program from several sources, the principal source by a wide margin is the State child nutrition agency. Nearly 80% of all districts reported receiving assistance related to the SMI from this source. Other key sources include: the USDA Food and Nutrition Information Center, professional associations, computer/software vendors, and the National Food Service Management Institute. The assistance provided through each of these sources was given relatively high marks, with that provided by State agencies, consultants, and computer/software vendors rated particularly high.

Training provided and remaining needs

A majority of all school districts have received training on most key aspects of the SMI. Nearly all participants in the training programs find them of at least "some use" and for many of the topics treated in these programs a majority find them "very useful". Despite the fact that 80% of all districts had received some SMI training, 40% to 60% of all districts reported that

they had not received training on several key aspects of the SMI. As further evidence of this need, when asked if their operations would benefit from additional training on a list of 10 topics related to the SMI, a large majority responded in the affirmative on all but one of the topics.

The Role of State Child Nutrition Agencies

All 50 State child nutrition agencies (SAs) were surveyed. Information was obtained regarding: the menu planning system used by school districts within their States, SA involvement in training and technical assistance, the status of nutrition compliance reviews, and any problems encountered in implementation of the SMI.

Menu planning systems

Within most states, two or more menu planning systems are being used. In only 3 States were all districts within the State reported to be using the same approach to menu planning. There are several States in which one or more of the menu planning options were not being used by any of the State's districts. This includes 28 states with no ANSMP districts, 10 with no traditional food-based, 8 with no NSMP, and 7 with no enhanced food-based.

Fifteen SAs were providing or preparing to provide an ANSMP system to school districts in their States. Of these, 9 were using outside expertise to develop the system; the other 6 were being developed in-house.

For reasons that are not evident, there is a large difference in the percentage of districts reported by SAs to be using the enhanced food-based and traditional food-based systems, compared to the estimates obtained from the survey of school districts. While the SAs report a 57%/43% split between enhanced and traditional, results of the district survey indicate a 33%/67% split.

Training and technical assistance

All 50 SAs reported that they were engaged in providing training in support of the SMI in their respective States in SYs 1995/96 and 1996/97. In all but 5 States, as least half of all districts within the State were represented in these sessions. Also, all but 5 SAs reported that they had provided on-site technical assistance related to the SMI during this period.

At least three-quarters of the SAs indicated that they had covered all or nearly all of 19 key topics in their training sessions. Nutrient analysis and marketing of the SMI were among the few topics that were not universally covered.

The SAs generally gave high marks to the quality of USDA training materials and technical assistance, though a significant minority found the information "less than adequate". Their most frequent criticism was that the information was not provided in a timely fashion, was not current, and was not sufficiently relevant to their needs.

Compliance reviews

SAs are required to conduct periodic reviews of school districts to determine if they are complying with SMI nutrition standards. Initially, these reviews were to be conducted on a 5-year cycle though the USDA has recently proposed that the initial cycle be 7 years.

At the time of the SA survey, 14 of the 50 SAs had not conducted any reviews. Of those that had started conducting reviews, 22 had conducted them for fewer than 20% of their school districts. This is indicative of the fact that several SAs were still in a "start-up" phase in terms of training State and district personnel, combined with the uncertainty of the review schedule.

Of the compliance reviews conducted during the first 1½ to 2 years of the SMI, nearly half (47%) resulted in the issuance of improvement plans. SAs reported widely varying outcomes in this regard. Ten SAs reported that their reviews had resulted in no improvement plans while 21 of the SAs reported that they had required improvement plans for 40% or more of all districts reviewed.

Results of the SA survey indicate that compliance reviews are requiring widely varying amounts of time to conduct. The median number of person-hours ranged between 14 and 24 per site, depending on the menu planning system being reviewed and whether the school served lunch only or both lunch and breakfast. Since a separate analysis of breakfast menus is not required unless a different menu planning system is being used for breakfast, it is not clear why these districts are requiring more time unless it is due to the influence of those few districts that are using a different planning system for their breakfasts.

Problems of SMI implementation

SAs were asked to identify any problems they had encountered in obtaining information required in monitoring SMI implementation. They were also asked to identify any problems the school districts in their States might be having in implementing the SMI. While SAs reported that they encountered little trouble in obtaining most information, a significant share of all SAs reported having a "major" problem with the following: missing standardized recipes (56%), missing nutritional information from the manufacturer (46%), incomplete production records (42%), and lack of a la carte and adult sales information (26%).

For most of the tasks that have to be performed by districts in implementing the SMI, SAs reported there were few, if any, problems. The three exceptions for which at least 20 SAs indicated there was a "major problem" were: adhering to standardized recipes, data entry for menu analysis for NSMP and ANSMP schools, and obtaining nutrient information from manufacturers. These tasks are integral to the success of SMI and therefore of particular importance.

CHAPTER I: INTRODUCTION AND PURPOSE OF THE STUDY

In late 1993, the United States Department of Agriculture (USDA) launched a major reform of the school lunch program, one of the most far-reaching reforms of the program since it was established over a half century ago. The central purpose of the reform is to upgrade the nutritional content of school meals. The several elements of the reform are collectively referred to as the "School Meals Initiative for Healthy Children" (SMI), the subject of this study. Before describing the SMI in greater detail, a brief description of the school meals programs will help set the stage.

School Meals Programs

The school-based Child Nutrition Programs, including the National School Lunch Program (NSLP), are the principal instruments of a national policy designed to safeguard the nutritional well-being of the Nation's children. They are administered by the Food and Nutrition Service (FNS) of the USDA, operating through State agencies (SAs) that have agreements with the local school systems in their States. The NSLP celebrated its 50th anniversary in 1996. The School Breakfast Program (SBP) has not been in operation as long. It began as a pilot project in 1966 and was made permanent in 1975. The number of school children participating in these programs has grown over the years. Today, over 26 million lunches are served daily in over 95,000 schools and over 7 million breakfasts are served in over 70,000 schools.

To achieve the health and dietary aims of these programs, participating schools are required to serve meals that meet prescribed standards. Until recently, USDA achieved this by identifying minimum amounts of particular food items (meat/meat alternative, bread/bread alternative, vegetables, fruits, and milk) that were to be incorporated in lunches that were nutritionally balanced and provided approximately one-third of the Recommended Dietary Allowances (RDAs) developed by the National Science Foundation.

To help all Americans make better dietary choices, the USDA and the US Department of Health and Human Services jointly developed the *Dietary Guidelines for Americans*. The Dietary Guidelines were first issued in 1980 and have been updated every five years since. Among other recommendations, the Dietary Guidelines call for diets in which fat comprises no more than 30% of caloric intake and saturated fat accounts for less than 10% of total calories for individuals two years of age and older. While these Dietary Guidelines were

developed for Americans of all ages, they offer a useful standard against which to measure the performance of the NSLP and SBP.

Despite increased attention to the Dietary Guidelines and programs like the NSLP and SBP, nutritional imbalances are increasingly commonplace in the American diet, indicating the need for changes in what we eat if we are to have healthful diets. An excessive intake of fat, saturated fat, and sodium and too little intake of foods containing complex carbohydrates and fiber have been shown by an accumulation of scientific evidence to have harmful health consequences.

Substantial progress has been achieved over the years in enhancing the quality of school meals. Nevertheless, results of USDA research conducted in the early 1990s indicated that school meals, on balance, were not meeting certain key elements of the Dietary Guidelines. School lunches were found to exceed the recommended levels of fat, saturated fat, and sodium by a substantial margin and fell short of the recommended level of carbohydrates.

The School Meals Initiative

In late 1993, the USDA launched the School Meals Initiative for Healthy Children for the purpose of modifying schools meals in order to meet the Dietary Guidelines. The SMI has four major missions. They are:

1. *Meeting the Dietary Guidelines for Americans.* Nutritional requirements that help make it possible for school meals to meet the Dietary Guidelines are the centerpiece of the SMI. Schools were to begin compliance with the Dietary Guidelines at the beginning of School Year 1996/97. There are now four menu-planning options that schools can use to meet the new standards. They are:

    - Nutrient Standard Menu Planning (NSMP), previously known as "NuMenus"
    - Assisted Nutrient Standard Menu Planning (ANSMP), previously known as "Assisted NuMenus"
    - Enhanced Food-Based Menu Planning
    - Traditional Food-Based Menu Planning

    NSMP and ANSMP are both accomplished through use of computer nutrient analysis. The principal distinction between the two is that NSMP is conducted by the SFA while a second party, such as the State Child Nutrition Agency or a consultant

conducts the nutrient analysis for ANSMP. Both techniques represent a significant departure from the approach that was formerly used. The other two menu planning options – enhanced food-based and traditional food-based – continue to base menu planning on prescribed portion sizes and food components. The principal difference between the two food-based approaches is that the enhanced system calls for increased quantities of vegetables, fruits, breads, and grains. All four planning systems are required to produce meals that meet the Dietary Guidelines.

2. *Providing nutrition education, training, and technical assistance.* Under the banner of Team Nutrition, the USDA has launched an extensive program of nutrition education, training, and technical assistance in support of State and local school food professionals. This includes the development of training standards, the design and dissemination of training materials, and the creation of public/private partnerships to promote healthy eating among school children.

3. *Making improvements in donated commodities.* With the guidance of its Commodities Improvement Council, the USDA has made a number of changes in its commodity distribution program. Collectively, these changes have further improved the nutritional profile of the commodities it buys for donation to schools. More recently, the USDA has initiated "Food Distribution 2000," a major review of all aspects of the program that is expected to result in additional reform.

4. *Streamlining program administration.* To free the time of school food personnel for the increased demands of the new menu planning systems, the Department has made changes designed to reduce the administrative burdens and paperwork requirements of the participating school districts. For example, the Department has extended the length of the coordinated review effort (CRE) cycle from 4 to 5 years. It also eliminated the requirement that school districts conduct daily checks of their meal counts if the district has an established record of accurate meal counts.

Purpose of the Study

This report is the first of three that will be issued annually during the course of this study. It has three principal objectives. They are to describe and evaluate:

- Implementation of the School Meals Initiative for Healthy Children.
- Key operational characteristics of State agencies and SFAs.

- Training and technical assistance activities.

In addition to these objectives, the remaining reports will assess other topical issues identified by FNS on the basis of current administrative and policy needs.

The principal focus of this report is the School Meals Initiative, its status, how it is being implemented, and its impact. This study marks the first collection of information relevant to the SMI from a nationally representative sample of school districts since the initiative got underway in School Year 1996/97. The other principal source of detailed information regarding implementation of the SMI is from an evaluation of a USDA-sponsored demonstration of Nutrient Standard Menu Planning, one of the four menu planning options.[1/] This demonstration began with 34 SFAs, though the number of participating districts narrowed to 23 by its end.

The objectives of this first year report correspond to those of the overall study. They are as follows:

- *State agency and SFA characteristics.* The report describes SFA and State agency characteristics. This provides both a current profile of these operations as well as a basis for interpreting progress in implementation of the SMI.

- *Implementation of the SMI.* This section of the report gauges progress in the implementation of the SMI, identifies factors that are facilitating and/or inhibiting implementation, and describes the impact of SMI on a range of performance measures. These findings provide a basis for determining if program and/or policy changes are required.

- *Training and technical assistance.* The USDA has developed and made available an array of training materials relating to the SMI. State agencies are the principal conduit for training and technical assistance to the SFAs. This report describes the training and technical assistance that is being provided to school districts, perceptions of the value of this assistance, and identifies remaining needs.

[1/] Mary Kay Fox, et al, *Evaluation of the Nutrient Standard Menu Planning Demonstration: Final Report*, Abt Associates, Inc., August 1998.

Outline of the Report

The report describes and interprets results of the first year surveys of a national sample of public SFAs participating in the NSLP and of the 50 State Child Nutrition Agencies. We begin in Chapter II with a brief description of study methodology, including study design, sample selection, and data collection procedures. This is followed in Chapter III by a description of key school district characteristics. In this chapter we examine the number of school districts by size, rates of student participation in the NSLP, meal prices, revenue sources, the use of food service management companies, and the use of computers, among other topics.

The remaining Chapters are devoted to examining the status, operation, and impact of the SMI from various perspectives. The section begins with a review in Chapter IV of the current status of SMI implementation -- how many SFAs are using each of the menu planning options, their basis for choosing among the options, and the availability of required documentation. Chapter V is devoted to an examination of the operational procedures used by SFAs in implementing the SMI, with particular emphasis on nutritional analysis and how it is conducted. This is followed in Chapter VI with an appraisal of the impact of the SMI on a broad range of program parameters including menus, staffing requirements, program costs, plate waste, a la carte offerings, and overall acceptance by key stakeholders.

In Chapter VII we examine the role of training and technical assistance in the implementation of the SMI. This includes SFA assessments of the availability and value of training materials and technical assistance, as well as the need for additional training. The final chapter, Chapter VIII, examines the role of State Child Nutrition Agencies in the SMI, including their involvement in providing training and technical assistance and in conducting compliance reviews.

CHAPTER II: METHODOLOGY

Study Design

This report is part of a three-year study of the U.S. Department of Agriculture's school-based child nutrition programs. The study is based on data collected from a nationally representative sample of school food authorities (SFAs) participating in the National School Lunch Program (NSLP) and from State agencies responsible for administration of the program. Data for the study were collected through use of self-administered mail surveys, supplemented by computer-assisted telephone interviews where necessary. Two surveys – one for the SFAs and another for the State agencies – were administered in SY 1997/98.

Survey instruments for SY 1997/98 were developed in the spring of 1997. Both instruments were reviewed by the Education Information Advisory Committee (EIAC) of the Council of Chief State School Officers. The SFA survey was pre-tested with six school districts from different parts of the nation and ranging in size from less than 5,000 enrollment to more than 120,000.

Design of the sample and its implementation are discussed in the following section. Once the sample was drawn, State CN Agencies were asked to confirm that the sampled SFAs within their respective States were participating in the NSLP and to provide names, addresses, and telephone numbers for each SFA. This information was collected in early 1998. In mid-March 1998, pre-notification letters were mailed to SFAs in the sample followed by SFA and State survey mailings about one week later. For those SFAs that did not respond to the survey or to the follow-up prompts or that provided incomplete responses, telephone interviews were conducted, as required, during May-August 1998. Data collection for the year-one surveys was concluded in September 1998. As indicated in Table II-1, the SFA response rates (number of completed interviews divided by the eligible sample size) varied from 83% to 95%, with an overall response rate of 91%. For the State survey, the response rate was 100%.

Sample Design and Implementation

The universe for the State agencies for the year-one study consisted of the Directors of Child Nutrition Programs in all 50 States. Since a census was conducted of all 50 agencies, a sample was not required. The target population of SFAs was comprised of all public SFAs in

the 50 States and the District of Columbia. In most instances, SFAs are coterminous with school districts; in a few instances they are not. The database of public school districts maintained by Quality Education Data (QED) of Denver, Colorado was determined to be the most complete and accurate frame readily available to the study.

Within this frame, it was determined that there were two types of school districts that were appropriate for inclusion in the study. One was what QED termed "regular public school districts." The other type consisted of fiscally independent districts that were administered by "supervisory unions." Of the 14,104 public school districts in the frame, 13,192 were regular districts and 912 were districts in supervisory unions. And while regular public school districts were identical to SFAs, it was determined through consultation with several State agencies that in some supervisory unions more than one district was served by an individual SFA. In effect, with the supervisory union districts it was not known which district belonged to which SFA and how many SFAs there were among these districts. Given this difference, regular school districts and school districts in supervisory unions were sampled separately. Assuming an eligibility rate of 95% and a response rate of 90%, it was determined that a sample of 2,325 districts – consisting of 2,225 regular school districts and 100 supervisory union districts – was required.

The frame for the regula r school districts was first stratified into fourteen strata according to a cross-classification of poverty status and USDA regions. Two levels of poverty (high and low) and FNS's seven administrative regions were used. The Orshansky measure in the QED frame was used to define poverty levels. High poverty districts were defined as those districts where 30% or more of the enrolled students were from families with incomes below the poverty line. According to this definition, 32% of the districts were classified as high poverty, and 68% of the districts were classified as low poverty.

The sample of 2,225 regular school districts was allocated to the 14 strata in proportion to the number of school districts in each stratum. Therefore, the sampling fraction was about 2,225/13,192 = 16.87% in all strata. Table II-1 describes the sample allocation to each stratum. Within each stratum, the sample was drawn with probability proportional to size (PPS), where size was defined as the square root of the number of students enrolled in a district. By using the square root instead of the actual enrollment, the skewness in the size distribution was reduced so that a sufficient number of small districts could be included in the sample.

Since the QED database includes all school districts, including some that do not participate in the NSLP, it was necessary to ask the State agencies to review the list of sampled districts in each of their States to determine if any were ineligible for inclusion in the study. Of the 2,225 regular school districts, 67 districts (3%) were found to be ineligible. This share is consistent with the results of past studies.

Table II-1: Regular public school districts, 1997

Stratum	Poverty (high=1, low=2)	Region	Total population size	Total sample size	Sample size (Eligible)	Completed interviews	Response rates (%)
1	1	1	198	33	33	29	88
2	1	2	324	55	55	48	87
3	1	3	751	127	126	118	94
4	1	4	203	34	34	31	91
5	1	5	555	94	94	82	87
6	1	6	1,411	238	237	225	95
7	1	7	800	135	133	120	90
8	2	1	1,088	183	175	145	83
9	2	2	2,813	474	451	415	90
10	2	3	1,781	300	291	263	90
11	2	4	1,046	177	169	152	90
12	2	5	494	83	83	75	90
13	2	6	651	110	109	101	93
14	2	7	1,077	182	168	152	90
Total			13,192	2,225	2,158	1,956	91

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

The frame for school districts in supervisory unions was stratified by poverty level – high poverty and low poverty, using the same Orshansky cutoff. Thus, it contained 145 high poverty districts and 767 low poverty districts. The sample was allocated to the two strata disproportionately, with 32 to high poverty districts and 68 to low poverty, to ensure sufficient representation of high poverty districts. Within each stratum the sample was drawn based on a probability proportional to size sampling scheme, i.e. using the same procedure that was used for sampling the regular school districts. As noted above, more than one of these districts could be associated with the same SFA. There were instances where both high poverty

districts and low poverty districts were being served by the same SFA. Table II-2 below provides the details of the sample of supervisory union districts.

Table II-2: Public school districts in supervisory unions, 1997

Stratum	Poverty	Total population size	Total sample size	Sample size (Eligible)	Completed interviews
1	High	145	32	30	26
2	Low	767	68	63	56
Total		912	100	93	82

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Data Analysis and Reporting

The sample data were weighted so that inferences could be drawn regarding the universe of all public school districts in the 50 States and the District of Columbia that participate in the NSLP. Weights were designed to adjust for differential probabilities of selection and non-response. Since those school districts that are in supervisory unions were selected into the sample through a sampling of supervisory unions rather than the districts themselves, there was no straightforward way to calculate the selection probability for each sampled school district in a supervisory union. Instead, the selection probability for these districts was estimated by simulating the sampling process 1,000 times. The simulation procedure was carried out separately for the high poverty stratum and the low poverty stratum.

At the outset of each chapter, key research questions to be addressed in the remainder of the chapter are identified. Results of the analysis are presented in tables accompanied by interpretive text. Most results are cross-tabulated by district size, program participation, and district poverty level. When appropriate, results are also cross-tabulated by school type and the type of menu planning system being used. These measures and their subgroups are defined as follows:

- *School district enrollment* (as of October 31, 1997):
  - Less than 1,000
  - 1,000 to 4,900
  - 5,000 to 24,900
  - 25,000 or more

- *Program participation* (School Year 1997/98):
  - Both NSLP and SBP
  - NSLP only

- *District poverty level* (share of district enrollment approved for free and reduced price meals as of October 31, 1997):
  - High (>60%)
  - Medium (31-60%)
  - Low (≤ 30%)

- *School type*:
  - Elementary – Schools composed of any span of grades not above Grade 8.
  - Middle/secondary – Schools that have no grade lower than Grade 6 and continue through Grade 12
  - Other schools – Schools that include grade spans other than those defined above, including, for example, schools with a K-12 grade span.

- *Menu planning systems*:
  - Nutrient Standard Menu Planning (NSMP)
  - Assisted Nutrient Standard Menu Planning (ANSMP)
  - Enhanced Food-Based Menu Planning
  - Traditional Food-Based Menu Planning
  - Other menu planning systems

To assess the statistical significance of differences between subgroups of school districts, t-tests were performed for certain variables. Between group differences that were found to be significant at the .01 and the .05 levels are reported.

Research Questions

A series of research questions for each of the study's three primary objectives provided the overall framework for analysis of the survey data. The objectives and their associated research questions are as follows:

Objective 1 – Implementation of the School Meals Initiative

For School Food Authorities:

- Which menu planning options (or combination of options) have SFAs adopted for use in implementing the School Meals Initiative for Healthy Children?
- What were the SFA's principal considerations in making these choices?
- What is the current status of implementation? If not fully implemented, do they have a plan and a schedule for achieving full implementation? When is full implementation expected?
- If nutrient analysis of recipes and menus is being conducted:
  - What procedures are being used?
  - What computer software is being used?
  - Is the analysis weighted or unweighted?
  - Have lunches and breakfasts been combined?
  - How often are menus re-analyzed?
- Which of the following problems were encountered and how were they solved:
  - Obtaining nutrient data for foods not in the database?
  - Obtaining reimbursable meal serving information for weighted analysis?
  - Standardizing recipes?
  - Meeting all the required nutrient standards?
  - Acceptability of food items, menu items, recipes, and menus?
  - Skill/training requirements?
  - Securing needed financial resources?

- Do SFAs disclose nutrition information for their menus to students? To parents? If so, what form does the disclosure take?

- What changes are SFAs making in their menus in order to meet nutritional objectives?

  - Use of menu cycles?
  - Use of self-serve foods (salad bars/theme bars, etc.)?
  - Availability of a la carte foods?
  - Number of menu choices?
  - Portion sizes offered (including tailoring portion size to age category)?
  - Use of cafeteria discretion?

- What changes are SFAs making in recipes and food preparation techniques?

  - Use of standardized recipes?
  - Use of USDA quantity and NSMP recipes?
  - Modify recipes to decrease fat/sodium?
  - Change food preparation techniques to decrease fat?

- What changes are SFAs making in food procurement practices?

  - Increased use of fresh fruits/vegetables?
  - Use of prepared, convenience foods?
  - Use of USDA donated commodities?
  - Use of low-fat/reduced-fat foods?
  - Requiring nutrition information from vendors?

- Changing product specifications?
- Use of purchasing cooperatives?

For State Agencies:

- How many SFAs within each State are using each of the authorized menu planning options (or combinations of options)?
- How many SFAs have requested and received waivers for the use of weighted nutrient analysis?
- What role has the State played in assisting public SFAs in the selection and implementation of new menu planning systems?
- Have State agencies offered general training sessions to SFAs to present the various menu planning options? If so, how many SFAs have been trained? What topics were treated in these training sessions?
- Have State agencies developed plans and procedures to provide ANSMP to SFAs in their States? Are the State agency staffs responsible for this or are they using outside resources? What software packages are States using to develop their ANSMP support?
- How are States monitoring SFA compliance with the School Meals Initiative? How many school sites have been reviewed? What have been the labor requirements to conduct these reviews? Were USDA prototype review forms used?
- To what extent have notifications been required due to SFAs not satisfying program requirements?
- What problems are being encountered by public SFAs using food-based menu planning systems in implementing the SMI? By SFAs using NSMP or ANSMP? By State agencies in monitoring SFA implementation of the SMI?

Objective 2 – Key operational characteristics

For each school food authority, determine:

- Student enrollment
- Average daily attendance
- Number of schools by grade category
- Number of schools participating in NSLP and SBP
- Number of students approved to receive free and reduced-price meals
- Full-price and reduced-price meal prices
- Number of serving days
- Number of full-price, reduced-price, and free meals served
- Use of food service management companies
- Use of computers (record keeping, nutrient analysis, point-of-sale, Internet, etc.)
- Revenue from reimbursable meal sales, Federal/State/local reimbursements, and a la carte sales
- Participation rates, NSLP and SBP – overall, free, reduced-price, paid, severe need (by elementary and middle/secondary)

Objective 3 – Training and technical assistance

- To what extent are SFAs familiar with training materials prepared by USDA? How useful have these materials been?
- For which topics relating to implementation of the SMI have SFA staff received training? How useful was this training?
- For which topics relating to implementation of the SMI do SFAs feel they require more training?

CHAPTER III: CHARACTERISTICS OF SCHOOL DISTRICTS PARTICIPATING IN THE SCHOOL MEALS PROGRAMS

Introduction

This chapter is devoted to setting the stage for the chapters that follow. In it we describe key aspects of the operations and characteristics of the public schools and school districts that participate in the US Department of Agriculture's school meals programs.

This information serves two purposes. First it provides an up-to-date snapshot of major dimensions of the program and the level of partic ipation in it. For most of the measures examined here, national estimates are not available elsewhere. By comparing these results with those of earlier studies, it is possible to show inferences with regard to the direction and pace of change in key program parameters.

A second purpose of the information provided in this chapter is to serve as a basis for assessing progress in the implementation of the SMI. In this regard, it will be used to determine whether school districts with certain characteristic s are having more (or less) difficulty complying with the requirements of SMI and having more (or less) success in achieving the program's objectives.

National estimates of the following program measures are provided and discussed in the remainder of the chapter:

- Number of schools and school districts.
- Student enrollment and attendance.
- Students approved for free and reduced-price meals.
- Number of meals served (free, reduced and full price.)
- Student participation in the school meals program.
- Meal prices.
- Revenue and revenue sources.
- Use of food service management companies.

- Use of computers.

Schools and School Districts in the NSLP/SBP

Survey results indicate that there were about 13,500 public school districts operating more than 84,000 public schools taking part in one or more of the school meals programs in SY 1997/98. The number of schools is about 2.2% above the number reported by FNS on the basis of its administrative records. As indicated in Tables III-2 and III-3, school districts of less than 1,000 students account for the largest share of the total number districts (43.1%) but for a smaller share of the number of schools (12.4%) and a still smaller share of total enrollment (5.2%). Overall, school districts in the smallest size class average fewer than two schools per district, indicating that there are numerous one-school districts.

At the other extreme, there are about 240 public school districts of at least 25,000 students that operate nearly a quarter (23.3%) of all schools attended by almost one-third (31.5%) of all public school students. On average, these school districts have slightly lower attendance rates than other districts, though the differences are relatively small.

There are nearly twice as many public elementary schools as there are public middle/secondary schools (51,669 versus 27,258). Since middle/secondary schools have average enrollments that are almost twice as large as the average enrollment of elementary schools (905 versus 1,700), however, both types of schools account for about the same number of students nationally.

For purposes of this study, "other" schools are those that include grade spans other than those defined as elementary (any span not above Grade 8) or middle/secondary (no grade lower than Grade 6 and through Grade 12). A school with Kindergarten through Grade 12 would be classified as an "other" school, for example. With an average enrollment of just over 3,000, "other" schools have the largest average enrollment of the three types.

About 75% of all school districts have schools that participate in both the lunch and breakfast programs and an equal share (75%) of all schools take part in both programs. On the basis of this survey, we estimate that there are about 900 schools (1.1%) within these districts that participate in neither the NSLP nor the SBP. There are also a few schools within these districts (fewer than 200) that participate in the breakfast program but not the lunch program.

In both circumstances, there is at least one other school in these districts that is participating in the lunch program, thereby qualifying them for inclusion in the sample.

In comparing the breakdown of school district characteristics with the findings of the Child Nutrition Program Operations Study (CNOPS) study conducted in the late 1980s, the most striking difference is in the much higher rate of school district participation in the SBP in SY 1997/98 (74.9% versus 37.2%).[1/] While some of this difference is due to the inclusion of private schools in the CNOPS study and not in this one, it is mainly a result of the 52% growth between fiscal years 1990 and 1998 in the number of schools (public and private) taking part in the SBP.

It is noted that the smallest districts (less than 1,000 students) now account for a somewhat smaller share of the total number. Still, they account for a larger share (43.1%) than any other size category. In comparison with 1989/90, the current share of high poverty districts is also somewhat lower.

Table III-1: Comparison of NSLP School District Characteristics in SY 1989/90 and SY 1997/98

District characteristics	SY 1989/90	SY 1997/98
	----------percent----------	
District size[1/]		
Less than 1,000	49.5	43.1
1,000 – 4,999	36.5	41.6
5,000 – 24,999	14.0[2/]	13.5
25,000 or more	---	1.8
Program participation		
NSLP and SBP	37.2	74.9
NSLP only	62.8	25.1
District poverty level[3/]		
High (>60% f&r)	(17.6)	15.5
Medium (31-60% f&r)	(82.4)	38.9
Low (≤30% f&r)	---	45.6

[1/] Total school district enrollment as of October 31, 1997.

[2/] Includes school districts of 5,000 or more.

[3/] Represented by the share of total enrollment as of October 31, 1997 approved for free and reduced-price (f&r) meals. Categories used in SY 1989/90 were: high-60% or more; low-less than 60%

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

[1/] Robert St. Pierre, et. al., *Child Nutrition Program Operations Study: Third Year Report*, FNS, USDA, p. 10.

Table III-2: Number of Public NSLP Schools and School Districts by Selected District Characteristics and School Type, SY 1997/98

District characteristics	Schools		School districts	
	Number	Percent of total	Number	Percent of total
All districts	85,272	100.0	13,503	100.0
District size[1/]				
Less than 1,000	10,596	12.4	5,820	43.1
1,000 – 4,999	26,972	31.6	5,623	41.6
5,000 – 24,999	27,840	32.6	1,819	13.5
25,000 or more	19,863	23.3	240	1.8
Program participation				
NSLP and SBP	63,936	75.0	10,107	74.9
NSLP only	20,258	23.8	3,396	25.1
SBP only	176	0.2	---	---
Neither NSLP nor SBP	902	1.1	---	---
District poverty level[2/]				
High (>60% f&r)	17,332	20.3	2,099	15.5
Medium (31-60% f&r)	33,961	39.8	5,252	38.9
Low (≤30% f&r)	33,978	39.8	6,152	45.6
School type				
Elementary	51,669	60.6	11,862[3/]	87.8[3/]
Middle/secondary	27,258	32.0	10,308[3/]	76.3[3/]
Other	6,345	7.4	3,627[3/]	26.9[3/]

[1/] Total school district enrollment as of October 31, 1997.

[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.

[3/] Number of school districts and percent of all school districts that include schools of the respective type. For example, 11,862 school districts (87.8% of the total) include elementary schools.

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Table III-3: Student Enrollment and Average Daily Attendance in Public NSLP School Districts by Selected District Characteristics and School Type, SY 1997/98

District characteristics	Student enrollment		Average daily attendance	Attendance as percent of enrollment
	Total	Share of total		
	(thou. students)	(percent)	(thou. students)	-------(percent)-------
All districts	48,227	100.0	45,173	93.7
District size[1/]				
Less than 1,000	2,525	5.2	2,388	94.6
1,000 – 4,999	13,028	27.0	12,252	94.0**
5,000 – 24,999	17,491	36.3	16,454	94.1**
25,000 or more	15,183	31.5	14,080	92.7**
Program participation				
NSLP and SBP	43,031	89.2	40,269	93.6
NSLP only	5,196	10.8	4,904	94.4**
District poverty level[2/]				
High (>60% f&r)	10,132	21.0	9,383	92.6
Medium (31-60% f&r)	18,134	37.6	16,999	93.7**
Low (≤30% f&r)	19,961	41.4	18,791	94.1**
School type				
Elementary	24,105	50.0	22,812	94.6
Middle/secondary	21,728	45.1	20,168	92.8
Other	2,394	5.0	2,197	91.8

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
** Between group differences significant at the .01 level. Reference groups used: district size – <1,000; program participation – NSLP and SBP; poverty level – high.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Table III-4: Number of Public NSLP School Districts by Key District Characteristics SY 1997/98

District size[1/]	Program participation				District poverty level[2/]					
	NSLP and SBP	%	NSLP only	%	High (>60% f&r)	%	Medium (31-60% f&r)	%	Low (≤30% f&r)	%
Less than 1,000	3,974	39.3	1,846	54.4	1,158	55.2	2,499	47.6	2,163	35.2
1,000 - 4,999	4,232	41.9	1,392	41.0	616	29.3	1,912	36.4	3,096	50.3
5,000 – 24,999	1,665	16.5	154	4.5	260	12.4	737	14.0	822	13.4
25,000 or more	236	2.3	4	0.1	65	3.1	103	2.0	72	1.2
Total	10,107	100.0	3,396	100.0	2,099	100.0	5,251	100.0	6,153	100.0
Program participation										
NSLP and SBP					1,929	91.9	4,442	84.6	3,736	60.7
NSLP only					171	8.1	809	15.4	2,416	39.3
Total					2,100	100.0	5,251	100.0	6,152	100.0

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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Student Participation and Rates of Participation

Lunches

An estimated 4.2 billion reimbursable lunches were served to students attending public school districts in SY 1996/97. This is very close to the number of lunches measured by FNS through its administrative records. Of this number, nearly half (48.4%) were free while 8.4% were sold at reduced prices; the remaining 43.2% were full-price.

There are several notable differences in the distribution of full-price, reduced-price, and free meals among districts with different characteristics, as indicated in Table III-5. Larger districts, districts that participate in both the lunch and breakfast programs, and those that have a high incidence of poverty are likely to experience a substantially higher share of free meals and a smaller share of full-priced meals.[1/] Conversely, smaller districts, districts that provide lunches only, and low poverty districts, on average, serve half or more of their lunches for full-price.

Table III-5: Number of NSLP Lunches Served in Public NSLP School Districts by Type of Meal and by Selected District Characteristics, SY 1996/97

District characteristics	Full-price		Reduced-price		Free		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	(million)		(million)		(million)		(million)	
All districts	1,801	43.2	348	8.4	2,018	48.4	4,167	100.0
District size[1/]								
Less than 1,000	146	54.4	27	10.0	96	35.7	269	100.0
1,000 – 4,999	596	52.5**	97	8.5**	443	39.0**	1,136	100.0
5,000 – 24,999	683	46.0**	123	8.2**	680	45.8**	1,486	100.0
25,000 or more	376	29.5**	102	8.0**	798	62.5**	1,277	100.0
Program participation								
NSLP and SBP	1,541	40.6	322	8.5	1,933	50.9	3,797	100.0
NSLP only	260	70.2**	26	7.0**	84	22.8**	370	100.0
District poverty level[2/]								
High (>60% f&r)	184	16.8	82	7.5	827	75.7	1,093	100.0
Medium (31-60% f&r)	684	40.2**	163	9.6**	853	50.2**	1,701	100.0
Low (≤30% f&r)	933	68.0**	104	7.6**	336	24.5**	1,373	100.0

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
** Between group differences significant at the .01 level. Reference groups used: district size – <1,000; program participation – NSLP and SBP; poverty level – high.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

[1/] It is noted that poverty is defined in terms of the share of total enrollment approved for free and reduced price meals. This measure is frequently used for this purpose in studies of primary and secondary education. A close, positive relationship between this measure and the share of meals served free and reduced is therefore to be expected

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In comparison with SY 1989/90, the share of free lunches in SY 1996/97 is appreciably higher (48.4% versus 40.1%) and the share of full-price lunches lower (43.2% verses 53.3%). The distribution of lunch types among different types of school districts was similar in both years. Further disaggregation of the SY 1996/97 data, by district size and poverty level, highlights the strength of the relationship between these characteristics and the distribution among meal types (see Table III-6).

It should be noted that some school districts do not charge any of their students for meals, regardless of whether they meet the eligibility criteria for free or reduced-priced meals. This includes school districts participating in the so-called "Provision II and III" alternatives to annual determinations of eligibility for free and reduced-price meals. These alternatives are provided as a means of streamlining program administration at the State and district levels.

Table III-6: Comparison of the Distribution of Lunches Served by Type of Meal and by Selected District Characteristics, SYs 1989/90 and 1996/97

District characteristics	Full-Price		Reduced-Price		Free	
	1989/90	1996/97	1989/90	1996/97	1989/90	1996/97
	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)
All districts	53.3	43.2	6.6	8.4	40.1	48.4
District size[1/]						
Less than 1,000	62.3	54.4	7.0	10.0	30.8	35.7
1,000 – 4,999	65.6	52.5**	6.3	8.5*	28.1	39.0*
5,000 – 24,999[2/]	47.4	46.0**	6.8	8.2*	45.8	45.8*
25,000 or more	–	29.5**	–	8.0*	–	62.5*
Program participation						
NSLP and SBP	45.1	40.6	6.6	8.5	47.8	50.9
NSLP only	73.2	70.2**	8.9	7.0*	21.0	22.8*
District poverty level[3/]						
High (>60% f&r)	23.3	16.8	7.5	7.5	69.2	75.7
Medium (31-60% f&r)[4/]	68.3	40.2**	6.7	9.6*	25.4	50.2*
Low (≤30% f&r)	–	68.0**	–	7.6*	–	24.5*

[1/] Total school district enrollment as of October 31, 1997.
[2/] For 1989/90, 5,000 or more
[3/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
[4/] For 1989/90, <60% f & r
** Between group differences significant at the .01 level. Reference groups used: district size – <1,000; program participation – NSLP and SBP; poverty level – high.
* Between group differences significant at the .05 level. Reference groups used: district size – <1,000; program participation – NSLP and SBP; poverty level – high.
Note: Data for 1989/90 is based on sample of public and private school districts; data for 1996/97 is based on sample of public schools only. "All districts" row is based on public school districts only in both 1989/90 and 1996/97.
Source: *Child Nutrition Program Operations Study: Third Year Report*, 1993 and *School Meals Initiative Implementation Study: First Year Report*, 2000

Breakfasts

The number of breakfasts served through the School Breakfast Program (SBP) has risen steadily in recent years having increased at an average annual rate of 8.0% between 1989 and 1996. On the basis of this study, it is estimated that approximately 1.1 billion breakfasts were served in public schools in SY 1996/97. Of this number, 78.4% were free, 7.0% reduced-price, and 14.6% full-price. As for lunches, the share of breakfasts that are served free rises with increasing district size and increasing poverty.

Despite the substantial growth that has occurred in the SBP, since data were collected in SY 1989/90, the distribution of meal types by key district characteristics has not changed much as can be seen in Table III-7. The relationship between meal type and district size was less apparent in SY 1989/90 than in SY 1996/97. But with that exception, the relationships are largely the same.

Table III-7: Comparison of the Distribution of Breakfasts Served by Type of Meal and by Selected District Characteristics, SY 1996/97

District characteristics	Full-price		Reduced-price		Free	
	1989/90	1996/97	1989/90	1996/97	1989/90	1996/97
	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)
All districts	13.9	14.6	5.4	7.0	80.6	78.4
District size[1/]						
Less than 1,000	16.0	23.7	6.5	10.6	77.5	65.7
1,000 – 4,999	18.7	18.7**	7.2	8.1**	74.1	73.2**
5,000 – 24,999[2/]	12.7	15.8**	5.1	7.0**	82.2	77.2**
25,000 or more	–	9.6**	–	5.6**	–	84.8**
District poverty level						
High (>60% f&r)	7.7	6.7	4.9	5.0	87.3	88.4
Medium (31-60% f&r)[4/]	22.8	16.3**	6.5	7.6**	70.7	76.0**
Low (<30% f&r)	–	28.9**	–	9.8**	–	62.3**

[1/] Total school district enrollment as of October 31, 1997.
[2/] For 1989/90, 5,000 or more
[3/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
[4/] For 1989/90, <60% f & r
** Between group differences significant at the .01 level. Reference groups used: district size – <1,000; poverty level – high.
Note: Data for 1989/90 is based on sample of public and private school districts; data for 1996/97 is based on sample of public schools only. "All districts" row is based on public school districts only in both 1989/90 and 1996/97.
Source: *Child Nutrition Program Operation Study: Third Report*, 1993 and *School Meals Initiative Implementation Study: First Year Report*, 2000

Table III-8: Number of SBP Breakfasts Served in Public NSLP School Districts by Type of Meal and by Selected District Characteristics, SY 1996/97

District characteristics	Full-price		Reduced-price		Free		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
	(millions)		(millions)		(millions)		(millions)	
All districts	155	14.6	74	7.0	830	78.4	1,059	100.0
District size[1/]								
Less than 1,000	14	23.7	6	10.6	37	65.7	57	100.0
1,000 – 4,999	46	18.7**	20	8.1**	182	73.2**	248	100.0
5,000 – 24,999	57	15.8**	25	7.0**	280	77.2**	363	100.0
25,000 or more	38	9.6**	22	5.6**	331	84.8**	390	100.0
District poverty level[2/]								
High (>60% f&r)	27	6.7	20	5.0	360	88.4	407	100.0
Medium (31-60% f&r)	78	16.3**	37	7.6**	365	76.0**	480	100.0
Low (≤30% f&r)	49	28.9**	17	9.8**	105	61.3**	171	100.0

[1/] Total school district enrollment as of October 31, 1997.

[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.

** Between group differences significant at the .01 level. Reference groups used: district size – <1,000; poverty level – high.

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Students Approved for Free and Reduced Price Meals

Of the 48.2 million children enrolled in public elementary and secondary schools in SY 1997/98, 15.7 million or 32.6% of the total were approved to receive free meals. This is slightly smaller than the 35.8% reported by FNS on the basis of its administrative records. In part, this difference is explained by the exclusion of US possessions and territories (especially Puerto Rico) and of private schools, both of which have higher rates of free approvals.

Only about one-fifth as many students were approved for reduced-price meals as for free meals. At 6.9% of total enrollment, reduced-price approvals account for the same share as reported by FNS.

Table III-9: Number of Students and Share of Total Enrollment in Public NSLP School Districts Approved to Receive Free and Reduced Price Meals by Selected District Characteristics, and School Type, SY 1997/98

District characteristics	Free approvals		Reduced-price approvals	
	Number of students	Share of total enrollment	Number of students	Share of total enrollment
	(million)	(percent)	(million)	(percent)
All districts	15.7	32.6	3.3	6.9
District size[1/]				
Less than 1,000	0.7	28.8	0.2	9.0
1,000 – 4,999	3.4	25.8**	0.9	6.7**
5,000 – 24,999	5.2	29.7**	1.1	6.6**
25,000 or more	6.4	42.4**	1.1	7.1**
Program participation				
NSLP and SBP	15.0	34.9	3.1	7.2
NSLP only	0.7	13.4**	0.2	4.6**
District poverty level[2/]				
High (>60% f&r)	6.4	63.1	0.8	8.2
Medium (31-60% f&r)	6.6	36.4**	1.5	8.3**
Low (≤30% f&r)	2.7	13.7**	1.0	5.0**
School type				
Elementary	9.5	39.4	1.9	8.0
Middle/secondary	5.5	25.1*	1.2	5.7*
Other	0.8	32.2*	0.2	7.2*

[1/] Total school district enrollment as of October 31, 1997.

[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.

** Between group differences significant at the .01 level. Reference groups used: district size – <1,000; program participation – NSLP and SBP; poverty level – high.

* Between group differences significant at the .05 level. Reference groups used: district size – <1,000; program participation – NSLP and SBP; poverty level – high.

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

The share of all students approved to receive free meals was found to be highest in: the largest school districts, those districts that participated in both NSLP and the SBP, high poverty districts, and elementary schools. Approvals for reduced price lunches were found to follow a similar pattern, with a couple exceptions. With regard to district size, the incidence of reduced price approvals was highest among the smallest districts. Also, there was little difference between the share of reduced-price approvals for high and medium poverty districts.

Meal Prices

The level of meal prices is important for at least two reasons. First, since cash receipts from the sale of reimbursable meals are a major source of revenue for school food programs, changes in meal prices can be an indication of changes in program costs. To the extent school districts have made changes in the foods they purchase and/or in their operations as a result of the SMI procedures, changes in costs could have resulted. Of course, changes in meal prices can be driven by other factors as well.

A second reason for examining meal prices is for the effect they have on the demand for meals. Past research has found that price is the most important single variable affecting the frequency of participation in the lunch program.[1/]

Thus, trends in meal prices and differences in meal prices among school systems with different characteristics can have an important bearing on program performance, including participation. It will be particularly important to look for evidence of relationships between meal prices and the progress of school districts in implementing the SMI.

Lunch Prices

The average price for a full-price lunch in public elementary schools in SY 1997/98 (Table III-10) was $1.21, while in middle/secondary schools (Table III-11) it was $1.38. This compares to average prices of $1.02 in elementary schools and $1.16 in middle/secondary schools in SY 1990/91 as estimated in earlier research.[2/] This represents an increase of 18.6%

[1/] Jean B. Wellisch, et. al., *The National Evaluation of School Nutrition Programs: Final Report*, System Development Corp., April 1983, Vol. 1, PP245-9. Results of this analysis measured a price elasticity of –0.5 to –0.8 across the range of most frequently charged prices. The study found a higher elasticity for reduced price meals than for full price meals and higher elasticity for breakfasts than for lunches.

[2/] St. Pierre, R.; Puma, M.; Moss, M.; and Fox, M.K., *Child Nutrition Program Operations Study: Third Year Report*, Abt Associates, January 1993. This study included both public and private schools in its sample.

and 19.0%, respectively, slightly greater than the 16.8% increase in the all urban Consumer Price Index for food away from home between 1989 and 1998.

The mean price of full-price lunches is lowest for high poverty districts, for districts participating in both lunch and breakfast programs, and the smallest districts. This applies to both elementary and middle/secondary schools.

The price charged for reduced-price lunches is strongly influenced by the Federally-imposed ceiling of $.40 in SY 1997/98. Since some school districts charge less than this, the mean across all districts is $.38 for both elementary and middle/secondary schools. This is nearly identical to the level that was measured in SY 1990/91 when the same Federally-imposed ceiling prevailed. On average, there is little difference among districts regarding the price they charge for reduced price lunches.

Table III-10: Elementary School Lunch Prices for Public NSLP School Districts by Selected District Characteristics, SY 1997/98

District characteristics	Full-price lunch			Reduced-price lunch		
	Mean	Median	Range	Mean	Median	Range
	dollars					
All districts	1.21	1.25	0-2.50	.38	.40	0-0.40
District size[1/]						
Less than 1,000	1.14	1.20	0-2.50	.38	.40	0-0.40
1,000 – 4,999	1.27**	1.25	0-2.25	.39**	.40	0-0.40
5,000 – 24,999	1.28**	1.25	0-2.25	.38	.40	0-0.40
25,000 or more	1.23**	1.25	0-1.75	.36*	.40	0-0.40
Program participation						
NSLP and SBP	1.18	1.24	0-2.50	.38	.40	0-0.40
NSLP only	1.31**	1.30	.50-2.50	.39**	.40	0-0.40
District poverty level[2/]						
High (>60% f&r)	0.96	1.00	0-1.65	.36	.40	0-0.40
Medium (31-60% f&r)	1.17**	1.20	0-2.50	.38**	.40	0-0.40
Low (≤30% f&r)	1.34**	1.35	.60-2.50	.39**	.40	0-0.40

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
** Between group differences significant at the .01 level. Reference groups used: district size – <1,000; program participation – NSLP and SBP; poverty level – high.
* Between group differences significant at the .05 level. Reference groups used: district size – <1,000; program participation – NSLP and SBP; poverty level - high.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Table III-11: Middle/Secondary School Lunch Prices for Public NSLP School Districts by Selected District Characteristics, SY 1997/98

District characteristics	Full-price lunch			Reduced-price lunch		
	Mean	Median	Range	Mean	Median	Range
	dollars					
All districts	1.38	1.40	0-3.00	.38	.40	0-0.40
District size[1/]						
Less than 1,000	1.29	1.25	0-3.00	.38	.40	0-0.40
1,000 – 4,999	1.42**	1.45	0-2.50	.39**	.40	0-0.40
5,000 – 24,999	1.46**	1.50	0-2.50	.38	.40	0-0.40
25,000 or more	1.41**	1.45	0-2.00	.36*	.40	0-0.40
Program participation						
NSLP and SBP	1.35	1.35	0-3.00	.38	.40	0-0.40
NSLP only	1.49**	1.50	0.75-2.50	.40**	.40	0-0.40
District poverty level[2/]						
High (>60% f&r)	1.11	1.17	0-2.00	.37	.40	0-0.40
Medium (31-60% f&r)	1.34**	1.30	0-3.00	.38**	.40	0-0.40
Low (≤30% f&r)	1.50**	1.50	0.50-2.50	.39**	.40	0-0.40

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
** Between group differences significant at the .01 level. Reference groups used: district size – <1,000; program participation – NSLP and SBP; poverty level – high.
* Between group differences significant at the .05 level. Reference groups used: district size – <1,000; program participation – NSLP and SBP; poverty level – high.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Breakfast Prices

Paid breakfast prices averaged $.68 in public elementary schools in SY 1997/98 and $.71 in middle/secondary schools. These prices compare to estimates for SY 1990/91 of $.52 and $.55, respectively. This represents an increase of about 30%, which is somewhat greater than the 16.8% increase in the CPI for food away from home over the same period.

As in the case of lunch prices, full-priced breakfasts were cheapest for the smallest districts and for high poverty districts. This relationship was found in both elementary and middle/secondary schools. The differences in price between high and low poverty districts were particularly large with the low poverty districts charging an average price that was one-third or more higher than charged in the high poverty districts.

Most reduced-price breakfasts are sold at or near the ceiling of $.30. As a result, the mean prices across all districts is $.28 in both elementary and middle/secondary schools, with little variation among sizes or poverty levels. There has been very little change since SY 1990/91

when the average price in elementary schools was the same as reported here, while the average price in middle/secondary schools was 1 cent lower in SY 1997/98.

Table III-12: Elementary School Breakfast Prices for Public NSLP School Districts by Selected District Characteristics, SY 1997/98

District characteristics	Full-price breakfast			Reduced-price breakfast		
	Mean	Median	Range	Mean	Median	Range
	dollars					
All districts	.68	.70	0-1.50	.28	.30	0-0.30
District size[1/]						
Less than 1,000	.64	.64	0-1.30	.28	.30	0-0.30
1,000 – 4,999	.69**	.70	0-1.25	.29**	.30	0-0.30
5,000 – 24,999	.71**	.75	0-1.50	.28	.30	0-0.30
25,000 or more	.70**	.70	0-1.30	.26*	.30	0-0.30
District poverty level[2/]						
High (>60% f&r)	.55	.57	0-1.05	.26	.30	0-0.30
Medium (31-60% f&r)	.67**	.68	0-1.50	.29**	.30	0-0.30
Low (≤30% f&r)	.75**	.75	0-1.30	.29**	.30	0-0.30

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
** Between group differences significant at the .01 level. Reference groups used: district size – <1,000; poverty level – high.
* Between group differences significant at the .05 level. Reference groups used: district size – <1,000; poverty level – high.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Table III-13: Middle/Secondary School Breakfast Prices for Public NSLP School Districts by Selected District Characteristics, SY 1997/98

District characteristics	Full-price breakfast			Reduced-price breakfast		
	Mean	Median	Range	Mean	Median	Range
	dollars					
All districts	.71	.75	0-1.75	.28	.30	0-0.30
District size[1/]						
Less than 1,000	.67	.68	0-1.75	.28	.30	0-0.30
1,000 – 4,999	.73**	.75	0-1.50	.29**	.30	0-0.30
5,000 – 24,999	.77**	.75	0-1.55	.28	.30	0-0.30
25,000 or more	.75**	.75	0-1.50	.26*	.30	0-0.30
District poverty level[2/]						
High (>60% f&r)	.59	.60	0-1.25	.26	.30	0-0.30
Medium (31-60% f&r)	.72**	.75	0-1.75	.29**	.30	0-0.30
Low (≤30% f&r)	.78**	.75	0-1.55	.29**	.30	0-0.30

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
** Between group differences significant at the .01 level. Reference groups used: district size – <1,000; poverty level – high.
* Between group differences significant at the .05 level. Reference groups used: district size – <1,000; poverty level – high.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Revenue Sources

School food programs are under continuing pressure to generate sufficient revenue to be self-supporting. They have three principal revenue sources: cash receipts from the sale of full-price and reduce-price reimbursable meals, Federal reimbursements, and receipts from a la carte food sales. Another source of revenue is State revenue matching. Some States provide substantial State funding. More than 10 cents per meal, on average, is provided to school districts from State revenue matching. For many school districts, some additional revenue is generated through an assortment of other activities including schools events, local catering, and meal service for other Federal programs, such as Head Start and the Summer Food Service Program.

As indicated above in SY 1997/98, full-price lunches averaged $1.21 in elementary schools and $1.38 in middle/secondary schools, and reduced-price lunches $.38 in both elementary and middle/secondary schools. Corresponding breakfast prices averaged $.68, $.72, and $.28. Federal reimbursements for the school meals programs are based on the number of qualifying meals served to enrolled students, distinguishing between those students approved for free and reduced-price meals and those required to pay full price. The standard per meal reimbursement rates for SY 1997/98 were as follows:

	Lunch	Breakfast
Free	$1.89	$1.045
Reduced-price	1.49	.745
Full-price	.18	.20

Schools in high poverty areas receive some additional Federal assistance. An additional 2 cents per lunch is added to the reimbursement in schools in which 60% or more of the lunches served in the second preceding year were claimed as free or reduced price. Similarly, a "severe-need" reimbursement rate is applied to free and reduced price breakfasts served in districts in which 40% or more of the lunches are served to children from families with incomes below 180% of the poverty level and that have unusually high meal preparation costs. In School Year 1997/98 these rates were:

- Free -- $1.245, and
- Reduced price -- $.945.

In addition to the cash assistance received from the Federal government, school districts participating in the NSLP receive donated commodities. In School Year 1997/98, these donations were valued at about $.15 per reimbursable lunch.

As indicated in Table III-14, Federal reimbursements are the predominant source of revenue for public school districts. In SY 1996/97, Federal reimbursements accounted for 56.6% of the estimated $12.5 billion in total revenue. This is more that 2½ times the share of the next most important source, cash receipts from the sale of reimbursable meals. As a share of total revenue, Federal reimbursements are somewhat more important among the largest districts and are substantially more important among those districts that have both lunch and breakfast programs and that have a higher incidence of poor students. Among the 2,099 school districts in the high poverty category, Federal reimbursements accounted for 81.6% of total revenue.

Cash receipts from the sale of reimbursable meals come in a distant second in relative importance, accounting for 22.1% of revenue among all districts. For those districts that participate only in the lunch program and for those with a low incidence of poverty, however, cash receipts are the principal generator of revenue.

Receipts from the sale of food on an a la carte basis accounted for 12.8% of revenue for all districts. A la carte sales are not offered in all schools. In particular, elementary schools and schools in smaller school districts are less likely to offer foods a la carte. An earlier study conducted for FNS found that 69.3% of all districts and 54.1% of all schools offered a la carte lunch items and that 89.7% of all students had access to a la carte in SY 1996/97.[1/]

As indicated in Table III-14, the smallest districts and those with the highest incidence of poverty received the smallest share of their revenue from a la carte sales. Conversely, those districts that served lunch only received a substantially higher share of their revenue from these sales. For these districts, a la carte receipts approached the size of Federal reimbursements.

There are few benchmarks against which to compare these findings. The *School Lunch and Breakfast Cost Study* estimated the SY 1992/92 composition of revenues nationally on the basis of a sample of 94 school districts.[2/] The *School Food Purchase Study* collected information on revenue for SY 1996/97 from 328 school districts.

[1/] Daft,L., Arcos, A., Hollawell, A., Root, C., and Westfall, D. W., *School Food Purchase Study: Final Report*, FNS, USDA, September 1998.

[2/] Glantz, F.B., Logan, C., Weiner, H.M., Battaglia, M., and Gorowitz, E., *School Lunch and Breakfast Cost Study: Final Report*, FNS/USDA, October 1994.

Excluding the value of donated commodities from results of the 1992/92 study, a comparison of the findings of the three studies in terms of the distribution of total revenue is as follows:

	1992/93	1996/97	
	School Lunch/ Breakfast Cost Study	School Food Purchase Study	SMI Study
	percent		
Cash receipts from reimbursable sales	37.0	24.3	22.1
Federal reimbursements	40.7	55.9	56.6
A la carte sales receipts	16.3	13.6	12.8
Revenue from other sources[1/]	5.9	6.2	8.5

[1/] Revenue from State and local reimbursements are included in the School Lunch/Breakfast Cost Study and the SMI Study but not in the School Food Purchase Study. Federal reimbursements for programs other than NSLP and SBP are included in this category in both 1996/97 studies.

The relatively small sample size used for the 1992/93 study and the inclusion of private schools might help explain the difference between its findings and those of this study with regard to the share of revenue from cash receipts from reimbursable sales and from Federal reimbursements.

The percentage distribution of revenue by source in the *School Food Purchase Study* closely parallels the findings of this study. Although data were collected for SY 1996/97 in both studies, the *School Food Purchase Study* was limited to *unified* public school districts. In addition, school districts taking part in the *School Food Purchase Study* that could not provide a la carte sales receipts or other program sales receipts were excluded from the analysis. As a result, the absolute dollar estimates of the two studies are not comparable.

Table III-14: Sources of School Food Revenue for Public NSLP School Districts by Selected District Characteristics, SY 1997/98

Districts characteristics	Federal reimbursements		Cash receipts from sale of reimbursable meals		A la carte sales receipts		Other program sales receipts		Total	
	$million	% of total	$million	% of total	$million	% of total	$million	% of total	$million	% of total
All districts	7,095	56.6	2,769	22.1	1,609	12.8	1,072	8.5	12,545	100.0
District size[1/]										
Less than 1,000	417	53.0	218	27.8	43	5.4	109	13.8	787	100.0
1,000 - 4,999	2,686	57.3**	962	20.5	585	12.5**	458	9.8*	4,690	100.0
5,000 - 24,999	1,867	49.3**	1,041	27.5**	599	15.8**	277	7.3**	3,785	100.0
25,000 or more	2,125	64.7	547	16.7**	382	11.6**	229	7.0	3,283	100.0
Program participation										
NSLP and SBP	6,846	58.9	2390	20.6	1,384	12.0	992	8.5	11,622	100.0
NSLP only	249	27.0**	379	41.1**	215	23.3**	79	8.6*	922	100.0
District poverty level[2/]										
High (>60% f&r)	3,212	81.6	297	7.6	215	5.5	212	5.4	3,937	100.0
Medium (31-60% f&r)	2,521	54.5**	1,028	22.2**	569	12.3**	512	11.1	4,630	100.0
Low (≤30% f&r)	1,361	34.2**	1,444	36.3**	825	20.8**	348	8.8*	3,978	100.0

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
** Between group differences significant at the .01 level. Reference groups used: district size – <1,000; program participation – NSLP and SBP; poverty level – high.
* Between group differences significant at the .05 level. Reference groups used: district size – <1,000; program participation – NSLP and SBP; poverty level – high.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Use of Food Service Management Companies

Some school districts contract with commercial firms, called food service management companies (FSMC's), to manage part or all of their foodservice operations. The share of all districts that contract with FSMC's has been increasing in recent years. A 1996 report by the General Accounting Office estimated that the share of NSLP school food authorities (public and private) that contracted with FSMC's had risen from 4.0% in SY 1987/88 to 8.9% in SY 1994/95.[1/] Two additional studies conducted for FNS, one in SY 1988/89 and the other in SY 1990/91, estimated that 9.0% and 5.7% of all public school districts were managed by FSMCs

[1/] General Accounting Office, *School Lunch Program: Role and Impact of Private Food Service Companies*, GAO/RCED-96-217, August 1996, p. 20.

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in these respective school years.[1/] More recently, a study of public unified school districts conducted for FNS found that 9.7% were managed by FSMC's in SY 1996/97.[2/]

Table III-15: Number of Public NSLP School Districts Utilizing the Services of a Food Service Management Company by Selected District Characteristics, SY 1997/98

District characteristics	Total number Of districts	Number of districts using FSMCs	Districts using FSMCs as percent of total
All districts	13,503	1,588	11.8
District size[1/]			
Less than 1,000	5,820	342	5.9
1,000 – 4,999	5,623	919	16.3
5,000 – 24,999	1,819	303	16.7
25,000 or more	240	24	10.0
Program participation			
NSLP and SBP	10,107	1,041	10.3
NSLP only	3,396	547	16.1
District poverty level[2/]			
High (>60% f&r)	2,099	126	6.0
Medium (31-60% f&r)	5,252	404	7.7
Low (≤30% f&r)	6,152	1,058	17.2

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Results of the survey of school districts conducted as part of this study indicate that the share of school districts using FSMCs has continued to grow, though probably at a slower rate. In SY 1997/98, about 11.8% of all public school districts reported that their foodservice operations were under the direction of a food service management company. On the basis of these results, it would appear that FSMCs are more likely to operate in school districts that: are of medium size (1,000-24,999 enrollment), operate only the NSLP, and have a low incidence of poverty. Conversely, districts of less than 1,000 students and districts with a relatively high incidence of poverty have a substantially smaller share of their number managed by FSMCs. These relationships are consistent with the studies conducted for FNS in SY 1988/89 and SY 1996/97, though the additional categories included in the current study make the relationship more apparent

[1/] St. Pierre, R.; Fox, M.K.; Puma, M.; Glauty, F.; and Moss, M., *Child Nutrition Program Operations Study: First Year Report*, USDA/FNS, August 1991 and Pricewaterhouse, *Study of Food Service Management Companies in School Nutrition Programs*, USDA/FNS, June 1994.

[2/] Daft., p. 11-25

Use of Computers in Foodservice Operations

Opportunities for the use of computers in nearly any activity associated with record keeping or communication have grown exponentially in recent years. There are numerous functions routinely performed by school foodservice operations that lend themselves to computerization. Of particular interest to this study is the use of computers in nutrient analysis, as required in Nutrient Standard Menu Planning. Computers have been used for nutrient analysis on a limited scale for several years. With the adoption of the School Meals Initiative in 1996, however, FNS has become more directly and more actively involved in promoting the use of computers for this purpose, including the approval of commercial software packages and support for education and training programs.

Nearly 80% of all foodservice operations in public school districts used computers in some capacity in SY 1997/98. They were most frequently used for keeping track of meal records (60.0% of all districts) and word processing (43.9%). Over one-third of all districts used computers in conducting nutrient analysis (36.9%), doing menu planning (39.3%), and inventory control (37.6%).

Since larger schools are more likely to make use of computers, the impact of computers on school meals is somewhat understated when measured in terms of the number of school districts. When the focus is shifted to the share of total enrollment represented by the school districts using computers, the impact of their use is substantially higher. Approximately two-thirds or more of all students were in districts that use computers for nutrient analysis (63.7%), word processing (64.9%), procurement (65.9%), inventory control (70.6%), and meal record keeping (83.1%).

Comparison of these findings to those of the CNOPS study indicates that the use of computers for nutrient analysis has more than tripled over the past few years. Findings of the earlier study indicated that 11% of all public districts in 1988/89 and 9% in 1990/91 were using computers for nutrient analysis. This compares to the 36.9% of all districts estimated by this study.

Table III-16: Number of Public NSLP School Districts Utilizing Computers in Their Foodservice Operations by Activity, SY 1997/98

Computer use	Number of districts	Share of all districts	Share of total enrollment
		percent	
Procurement of goods and services	4,106	30.4	65.9
Meal records	8,104	60.0	83.1
Food production records	3,046	22.6	42.0
Inventory control	5,079	37.6	70.6
Nutrient analysis	4,979	36.9	63.7
Menu planning	5,306	39.3	61.0
Timekeeping	1,758	13.0	32.4
Personnel records	2,043	15.1	37.2
Internal communication	3,691	27.3	53.5
Word processing	5,929	43.9	64.9
Recipe file	2,809	20.8	35.0
Other	2,712	20.1	40.6
Computers not used	2,924	21.7	16.7
All districts	13,503	100.0	—

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

CHAPTER IV: OVERALL STATUS OF THE SCHOOL MEALS INITIATIVE IMPLEMENTATION

The primary purpose of this chapter is to take stock of how implementation of the School Meals Initiative (SMI) is going. While some key features of the program were changed during the first two years of the Initiative, the program has been operating in its modified form since SY 1996/97.[1/] As a result, the information collected for this study represents the first comprehensive assessment of SMI and its initial impact.

Before examining the current status of the SMI, it will be helpful to review key features of the program and the several fundamental changes required by it. Without doubt, the SMI is the most far-reaching change to be made in the school meals program since its enactment in 1946. The changes that have accompanied the SMI have impacted nearly every major interest in the system from the kids who eat the meals to the cooks who prepare them, from the school food staff who plan the menus and buy the food to the State and Federal agencies that administer the programs. To better appreciate the magnitude of these changes, it is useful to first remind ourselves how the program operated before the introduction of these reforms.

School Meals Prior to the SMI

Prior to the changes adopted, starting in 1994, school meal requirements were specified for the purpose of ensuring that children got enough to eat, including a balanced diet of nutritious foods. The NSLP originated shortly after World War II and the Great Depression out of concern that too many American children were undernourished. The requirements were also designed so that, over time, lunches provided approximately one-third and school breakfasts one-quarter of the National Academy of Science's Recommended Dietary Allowances (RDA). The RDAs indicate the recommended level of 29 key nutrients broken down by sex, age, and for pregnant and lactating women. To achieve this, participating schools were required to offer meals that met certain "meal patterns." The meal patterns were described in terms of minimum amounts of five principal components: meat or meat alternate, bread or bread alternate, vegetables, fruits, and milk. Different size helpings of each component were specified for each of five age/grade categories.

[1/] With the approval of their State administering agency, school districts could be granted waivers to postpone implementation until no later than School Year 1998/99.

The prescribed types and quantities of components for a school lunch for grades 4 to 12 are shown in Table IV-1. Comparable tables are available for other grades and for school breakfasts.

Table IV-1: Traditional Meal Pattern Requirements for the National School Lunch Program, Grades 4-12

Meal Components	Minimum Required Serving
Meat or meat alternate	*1 serving per meal*
Lean meat, poultry, or fish	2 oz.
Cheese	2 oz.
Large egg(s)	1 serving
Cooked dry beans or peas	½ cup
Peanut butter	4 tbsp.
Peanuts, soy nuts, tree nuts, or seeds	1 oz. = ½ the requirement
Vegetables, fruits and/or full-strength juices[1/]	*2 or more servings per meal, ¾ cup total portion*
Bread or bread alternate	*1 or more servings per meal/8 servings per week*
Enriched or whole-grain bread	1 slice
Enriched or whole-grain biscuit, muffin, roll or equivalent	1 serving
Cooked enriched or whole grain rice, macaroni, noodles, or other cereal grains such as bulgur or corn grits	½ cup
Milk	*1 serving per meal*
Fluid milk (whole milk and low fat milk must be offered daily)	½ pint (8 fluid oz.)

[1/] No more than one-half of the total requirement may be met with full-strength fruit or vegetable juice.
Source: USDA

Origin of the School Meals Initiative

The impetus for the SMI came from mounting scientific evidence that the excessive consumption of certain foods was having harmful effects on the health of Americans, including children. In particular, the high consumption of fat, saturated fat, and sodium and the low consumption of complex carbohydrates and fiber were placing a significant share of the population at risk to an increased incidence of heart disease, stroke, certain forms of cancer, and other chronic diseases.

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An assessment of the nutritional content of the school lunch and school breakfast programs conducted in early 1992 revealed that, on balance, the meals provided through these programs were not in conformance with the Federally-established Dietary Guidelines in several important respects.[1/] The study concluded that the average share of calories from total fat in school lunches (38%) exceeded the Dietary Guideline by 27%, the average share from saturated fat (15%) exceeded the Guideline by 50%, and the amount of sodium (1,479 mg) was nearly twice the desired level. Within the school food universe, the study found that virtually no schools had weekly lunch menus with average percentages of cabries from fat and saturated fat that met the Dietary Guidelines. However, the study also found that in 44% of the schools, students were offered at least one NSLP meal that met the Dietary Guidelines for percent of calories from fat. School breakfasts came close to meeting the Dietary Guidelines for total fat but not for saturated fat. With regard to the RDA for key nutrients, the study found that these were being met by school lunches with minor exceptions and by school breakfasts with the exception of food energy for males over 10 years of age and zinc for all students.

Against this backdrop, the US Department of Agriculture in late 1993 launched a public dialogue on how the school meals programs could be changed to enable them to more effectively contribute to the nutritional well-being of school-age children. A series of public hearings were held in 1993 and 1994 culminating in a Departmental plan – precursor to the SMI – to revamp the school meals programs. Among other elements, the plan included:

- modification of the school meal nutrition standards;
- expanded nutrition education, training, and technical assistance;
- improvements in the commodity donation program;
- streamlined administrative procedures.

In June 1994, the Department invited public comment on a proposed rule that described its proposal in detail. In response, the Department received over 14,000 comments during a 90-day comment period. Of particular interest to those responding to the proposed rule was that it required schools to: (a) use one of two computerized menu planning systems and (b) maintain detailed production records for use in computing a weighted nutritional analysis.

[1/] Burghardt, J.; Gordon, A.; Chapman, N.; Gleason, P.; Fraker, T., *The School Nutrition Dietary Assessment Study: School Food Service, Meals Offered, and Dietary Intakes*, FNS/USDA, October 1993.

In November 1994, before the Department could complete its analysis of public comments and prepare a final rule, the Congress enacted P.L.103-448, the Healthy Meals for Healthy Americans Act of 1994, which codified major elements of the Department's proposed rule. It also made significant amendments to the proposal, including directing the Department to make available a third "food-based" menu planning option, acceleration of the date required for compliance by two years (to SY 1996/97), and authority for State agencies to grant waivers through July 1, 1998.

On the basis of its new legislative authority and the extensive public comments received from its initial proposal, the Department drafted a new proposed rule and in January 1995 invited comment. On the basis of comments received in response to the proposed rule and during a public meeting on the subject held in February 1995, the Department published a final rule in June 1995 which required schools to use one of the two computerized menu planning systems or the Department's new "enhanced" food-based option.

Following publication of this final rule, the Congress further amended the authority in May 1996 through enactment of PL 104-149, the Healthy Meals for Children Act. This law added a fourth menu planning option in the form of the system in effect in SY 1994/95 that is essentially the same system that has been in effect since the program began in 1946. In addition, participating school districts were given the option of using "any reasonable approach" to menu planning, within the guidelines established by the Secretary of Agriculture.

But before a proposed rule implementing PL 104-149 could be made available for public comment, the Congress further amended the authority in August 1996 with approval of PL 104-193, the Personal Responsibility and Work Opportunity Reconciliation Act of 1996. This law mandated that participating schools, regardless of the menu planning system in use, satisfy (over the period of a week) the RDA requirements that were already incorporated in the Department's regulations.

One issue in particular has been prominent in the history of the SMI. That is the use of weighting when calculating the nutritional content of school food. The Department received nearly 3,000 comments on this issue in response to their original proposal. Most commented on the difficulty of maintaining records on food that was served both a la carte and as part of a reimbursable meal. Much of the opposition to the SMI (and the program modifications that resulted) grew out of school district dissatisfaction with this requirement. Ultimately, this resulted in legislation (P.L.105-336) that prohibits USDA from requiring schools to use

weighted analysis through School Year 2002/03. However, State Agencies may require their schools to use weighted analysis.

Also, to some extent lost in the several changes that were made in the SMI during this period was the ability to measure progress in the accomplishment of the program's nutritional objectives. As initially proposed, nutrient analysis would have been conducted on an on-going basis for all schools. Under the current system, schools that use food-based menu planning will be subject to nutrient analysis of their menus only once every five years at the time of the State compliance reviews.

An abbreviated history of the reform of this program is recounted here to provide the reader with an appreciation for both the high level of public involvement in the process and the prolonged period of discussion and revision that preceded the program assuming its current form. Although participating school districts were required to implement the SMI beginning in SY 1996/97 and the USDA has been providing education and training materials since at least SY 1995/96, there has been confusion and uncertainty over some aspects of the program during its start-up.

Elements of the School Meals Initiative

At its core, the SMI does two things:

1) It establishes a set of dietary objectives against which the performance of school meals programs can be objectively measured, and

2) It identifies alternative menu planning systems that schools can employ in accomplishing these objectives.

For its dietary objectives, the Department adopted a subset of both the Recommended Dietary Allowances (RDAs) and the Dietary Guidelines for Americans. As indicated earlier, the RDAs served as a basis for design of the meal requirements for the traditional school meals programs. As such, they have helped shape the composition of school meals for many years. And, as also noted earlier, school meals have been largely successful in meeting the nutrient targets of the RDAs.

Adoption of the Dietary Guidelines as an objective of school meals brings a significant new dimension to bear on the program, one that speaks directly to the programs' past nutritional shortcomings. The Dietary Guidelines were developed jointly by the Departments of

Agriculture and Health and Human Services as a means of providing general guidance to Americans on the essential components of a healthy diet. They are based on the best available scientific and medical knowledge. By law, they must be reviewed by a panel of experts every five years and amended as necessary. As a result, the guidelines were updated in 1985, 1990 and 1995.

The Dietary Guidelines issued in 1995 recommend that Americans:

- eat a variety of foods,
- limit total fat intake to 30% of calories,
- limit saturated fat intake to less than 10% of calories,
- choose a diet low in cholesterol,
- choose a diet with plenty of grain products, vegetables, and fruits,
- choose a diet moderate in salt and sodium, and
- choose a diet moderate in sugars.

New Approaches to Menu Planning

Through a combination of USDA proposals and Congressional mandates, as described above, four alternative approaches to menu planning were developed and are now available to schools participating in the NSLP. Three are new while the fourth, as required by law, is the system that has been in use since the beginning of the program. A final rule on "any reasonable approach," which will offer additional options, is currently being prepared within the Department. The development of these options was driven by several principles, including the following:

- to apply a uniform set of upgraded nutritional objectives to all the menu planning options;
- increased flexibility in the choice and combination of foods;
- to focus on the nutritional composition of meals rather than on meal components and food items;

- providing meals that adhere more closely to the nutritional differences of different student age groups;
- to take advantage of computer technology while recognizing the diversity of technical capability that exists among school districts;
- recognition that nutritional objectives are not to be met by individual foods or even in a given meal, but over a period time;
- recognition that changes in menu planning of this complexity can not be accomplished "over night."

The two approaches that represent the most significant departure from the old system are Nutrient Standard Menu Planning (NSMP) and Assisted Nutrient Standard Menu Planning (ANSMP). These systems are dependent on the use of computerized nutrient analysis and the use of USDA-approved software in conducting this analysis. The only difference between these approaches is that under NSMP, the school district itself is responsible for conducting its own nutrient analysis while under ANSMP, this analysis is conducted by another entity (e.g. the State Child Nutrition Agency or another school district) on behalf of the school district.

The other two menu planning options – Traditional Food-Based (TFB) and Enhanced Food-Based (EFB) – are food-based in the sense that meals are defined in terms of specific types and quantities of food, as in the old system.

The four menu planning options are compared in Table IV-2. It will be noted that some features are the same regardless of which option the district chooses to follow. All districts must satisfy the same nutrition goals. Also, all districts must maintain records on the processed foods they use, their food production, and menus. These records are for use by the State agencies when they periodically review each district's menu planning procedures. State agencies are required to do nutritional analysis whenever it is not being done by the district or by someone else for the district. Thus, for many districts using a food-based system, the State agency must use these records to conduct its own nutritional analysis as a means of gauging the district's performance in achieving its nutrition goals. For NSMP and ANSMP districts and other districts that conduct their own nutrient analysis, the records are used by the State agency in reviewing the district's analytic procedures and confirming their results.

The principal differences among the menu planning options are in the age/grade groups that are used, the structure and definition of a reimbursable meal, and, of course, responsibility for conducting nutrient analysis. With the exception of the Traditional Food-Based system, the age/grade groupings have been updated to better reflect the nutritional requirements of children of different ages.[1/] NSMP and ANSMP group grades K-6 and 7-12 with an optional standard for schools with grades K-3. As an option to using grades, schools using these menu planning systems may use ages instead. The suggested age breaks are: 3-6, 7-10, 11-13, and 14 and older. Alternatively, NSMP and ANSMP schools may also customize their age groups. The enhanced food-based system uses the same grade breaks as NSMP and ANSMP, though no breakdown by age is provided. Schools using the traditional food-based system continue to use the same grade groupings that were used in the past, i.e. K-3 and 4-12 with an option for schools with grades 7-12.

The structure of the meal and the way in which reimbursable meals are defined are still tied to the quantities and types of food under the two food-based systems. The composition of the meal in the Enhanced Food-Based system has been modified ("enhanced") to enable districts to more readily meet the nutritional goals of the program. More specifically, the Enhanced system requires more and/or larger servings of grains, breads, vegetables, and fruits, and slightly smaller servings of meats or meat alternatives. Under NSMP and ANSMP, a reimbursable meal must include at least three menu items with an entrée, fluid milk, and at least one side dish.

[1/] Nutrient requirements undergo an especially large jump between the ages of 10 and 11 (Grades 5 and 6). This dividing line is better reflected in the new groupings.

Table IV-2: Major Features of Alternative Menu Planning Systems for Lunches

Topic	Traditional	Enhanced	NSMP	ANSMP
Nutrition goals	---------- One-third of RDAs; dietary guidelines (averaged over school week) ----------			
Age/grade groups	Grades K-3 and 4-12 Option: Grades 7-12	Grades K-6 and 7-12 Option: K-3	Grades K-6 and 7-12 Option: K-3 Option: ages 3-6, 7-10, 11-13, 14 and older Option: customized age groups	Grades K-6 and 7-12 Option: K-3 Option: ages 3-6, 7-10, 11-13, 14 and older Option: customized age groups
Reimbursable meal	Four food components/five food items	Four food components/five food items	At least three menu items	At least three menu items
Meal structure	Specified quantities for each grade category for each of four meal components	Specified quantities for each grade category for each of four meal components	Entrée, fluid milk, and at least one side dish	Entrée, fluid milk, and at least one side dish
Offer versus serve	Required for high school; high school students must choose no fewer than three of five food items		Required for high school; must select at least two of three menu items, one of them the entrée; if more than three menu items, may decline no more than two	Required for high school; must select at least two of three menu items, one of them the entrée; if more than three menu items, may decline no more than two
Standardized recipes	Record and copy of recipes used must be available during review		Required for all new menu items with two or more ingredients or that require preparation	Required for all new menu items with two or more ingredients or that require preparation
Processed foods	---------- Record of products used to be kept on file ----------			
Production records	---------- Food production and menu records kept on file ----------			
Computerized nutrient analysis	Not required		Conducted by district using USDA approved software	Conducted by another entity on behalf of district using USDA approved software

Source: USDA, FNS, *A Menu Planner for Healthy School Meals*, FNS 303, 1998

Research Questions

The central purpose of this chapter, as noted above, is to describe the overall status of the SMI as of SY 1997/98. This is accomplished by addressing the following research questions:

- How many schools and how many school districts have adopted each of the menu planning options? To what extent are school districts using more than one system among the schools in their districts? Are there significant differences in the use of menu planning systems on the basis of district characteristics?
- Which factors were of greatest importance to school districts in their choice of menu planning system for elementary schools and for middle/secondary schools? Are there significant differences among districts with different characteristics?
- How far have school districts progressed toward full implementation of their chosen menu planning option? Are there significant differences in the level of progress by district characteristics, including the menu planning system that is being used?
- What menu planning systems are being used by school districts operating under a Food Service Management Company?
- What are the intentions of those school districts that are now using food-based menu planning systems with regard to the adoption of nutrient standard menu planning for their elementary schools and for their middle/secondary schools? Are there significant differences in intentions on the basis of district characteristics?

Use of Menu Planning Systems

As indicated earlier, the SMI provides school districts with four menu planning options that are specified in considerable detail as well as a fifth option for "any reasonable approach." Though it is expected that most school districts will select one of these options and use it in all schools throughout the district, some districts might choose to use more than one menu planning system, at least temporarily. For example, a district might choose to use one system in its elementary schools and another in its middle/secondary schools. Alternatively, some districts might choose to gradually phase in nutrient standard menu planning, leaving some

schools in the traditional food-based system for the time being. Still other districts might wish to experiment with two or more of the options before deciding which one better serves their needs.

Survey findings indicate that a large majority of both school districts (81.4%) and schools (74.2%) were using one of the food-based systems in SY 1997/98. Not all districts were using one system to the exclusion of the others. About 5.8% of all districts were using more than one menu planning system. Within the food-based category, results indicate that about twice as many districts were using the traditional approach as were using the enhanced approach (54.9% versus 26.5%). As discussed below, this finding is puzzling in that it contradicts evidence from other sources indicating that the enhanced system is more widely used. The NSMP approach was being used by just short of one-fifth (19.8%) of all districts while ANSMP was being used by only 3.4% of all districts.

Interestingly, a substantially larger share of all school districts report using computers to conduct nutrient analysis (36.9%) (see Table III-16) than report they are using NSMP or ANSMP (23.3%). This suggests that many districts that indicate they are using a food-based menu planning approach are also conducting nutrient analysis.

When compared on the basis of **schools** rather than **school districts** (Table IV-4), a slightly larger share use NSMP and a slightly smaller share use Traditional Food-Based. This is due to the somewhat greater likelihood that larger school districts will use the NSMP approach and the somewhat smaller likelihood that they will use Traditional Food-Based. Nonetheless, more than twice as many of the largest districts (25,000 or more) use a food-based system as use a nutrient standard system.

Only 3.4% of all districts and 1.9% of all schools use ANSMP. Not surprisingly, this system is substantially more likely to be found in smaller school districts. The "other" menu planning system is infrequently used. Only about 1.2% of all districts indicated use of a menu planning system other than the four principal systems.

About 600 districts (5%) report that their schools are using two menu planning systems. Some districts might be phasing-in to NSMP or ANSMP a few schools at a time. Others might have decided to implement NSMP or ANSMP for some schools (e.g., elementary schools) and not for others. Whatever the reasons, these districts have paired menu planning systems as follows:

Percent of Districts Using Two Menu Planning Systems

NSMP/Traditional Food-Based	38%
Enhanced Food-Based/Traditional Food-Based	21
NSMP/Enhanced Food-Based	17
NSMP/ANSMP	7
ANSMP/Traditional Food-Based	5
ANSMP/Enhanced Food-Based	5
Traditional Food-Based/Other	4
Enhanced Food-Based/Other	2
NSMP/Other	2
	100%

School districts under the direction of a food service management company (FSMC) were found to be substantially more likely to use NSMP than were districts that did not use FSMC's (39.2% vs. 17.3%). Conversely, a much smaller share of FSMC districts used the traditional food-based approach compared to the non-FSMC districts (37.4% vs. 57.2%).

As indicated above, the findings of the school district survey do not agree with information from other sources relative to the share of school districts using the Enhanced Food-Based system versus the Traditional Food-Based system. As measured in both the School Food Purchase Study using survey data collected from school districts for SY 1996/97 and in the SY 1997/98 survey of State Child Nutrition Program Directors for this study (Table IV-5), a somewhat larger share of districts was found to have used the Enhanced approach. This contrasts sharply with the results of this survey.

The reason for this discrepancy is not clear. While imputations were required for a relatively small number of non-responses, the methodology used would not have materially altered the outcome. The distribution of the unweighted data differ only slightly from the weighted distribution that appears in Table IV-5. The information provided by some State agencies for the State survey was estimated due to incomplete records or to a failure to differentiate between public and private schools. Again, however, the limited degree to which estimates were required is unlikely to have caused a difference of this magnitude. To the extent school districts have shifted between food-based options during this period, the more likely shift would have been from the traditional system to the enhanced system as districts found how hard it was to achieve the nutritional goals using the traditional approach. Yet, these results suggest a shift in the opposite direction.

Table IV-3: Number of Public NSLP School Districts by Type of Menu Planning System and by Selected District Characteristics, SY 1997/98

District characteristics	NSMP		ANSMP		Enhanced food-based		Traditional Food-based		Other		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent[1/]
All districts	2,679	19.8	454	3.4	3,580	26.5	7,409	54.9	163	1.2	13,503	100.0
District size[2/]												
Less than 1,000	1,085	18.6	245	4.2	1,316	22.6	3,358	57.7	55	0.9	5,820	100.0
1,000 – 4,999	1,070	19.0	164	2.9	1,598	28.4	3,103	55.2	74	1.3	5,623	100.0
5,000 – 24,999	449	24.7	43	2.4	607	33.4	835	45.9	26	1.4	1,820	100.0
25,000 or more	75	31.3	2	0.8	59	24.6	113	47.1	8	3.3	240	100.0
Program participation												
NSLP and SBP	2,136	21.1	296	2.9	2,477	24.5	5,657	56.0	145	1.4	10,107	100.0
NSLP only	544	16.0	158	4.7	1,103	32.5	1,753	51.6	18	0.5	3,396	100.0
District poverty level[3/]												
High (>60% f&r)	393	18.7	108	5.1	411	19.6	1,268	60.4	61	2.9	2,099	100.0
Medium (31-60% f&r)	1,178	22.4	178	3.4	1,390	26.5	2,780	52.9	51	1.0	5,252	100.0
Low (≤30% f&r)	1,109	18.0	167	2.7	1,779	28.9	3,361	54.6	51	0.8	6,152	100.0
Under direction of food service management company												
Yes	622	39.2	73	4.6	384	24.2	594	37.4	22	1.4	1,588	100.0
No	2,057	17.3	381	3.2	3,196	26.8	6,815	57.2	141	1.2	11,915	100.0

[1/] Row percentages do not sum to 100.0% because some school districts report using more than one menu planning system.
[2/] Total school district enrollment as of October 31, 1997.
[3/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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Table IV-4: Number of Schools in Public NSLP School Districts by Type of Menu Planning System and by Selected District Characteristics, and School Type, SY 1997/98

District characteristics	NSMP		Assisted NuMenu		Enhanced Food-based		Traditional Food-based		Other		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All districts	19,617	22.8	1,603	1.9	22,211	25.8	41,645	48.4	1,054	1.2	86,130	100.0
District size[1/]												
Less than 1,000	2,144	20.1	428	4.0	2,208	20.7	5,817	54.5	78	0.7	10,675	100.0
1,000 – 4,999	4,957	17.9	624	2.3	7,443	26.9	14,245	51.6	353	1.3	27,622	100.0
5,000 – 24,999	6,911	24.7	444	1.6	8,466	30.2	11,904	42.5	284	1.0	28,009	100.0
25,000 or more	5,606	28.3	107	0.5	4,095	20.7	9,679	48.8	338	1.7	19,825	100.0
Program participation												
NSLP and SBP	17,565	23.4	1,261	1.7	18,746	25.0	36,359	48.5	979	1.3	74,910	100.0
NSLP only	2,052	18.3	342	3.0	3,465	30.9	5,286	47.1	74	0.7	11,219	100.0
District poverty level[2/]												
High (>60% f&r)	3,629	20.7	209	1.2	3,043	17.4	10,403	59.4	238	1.4	17,522	100.0
Medium (31-60% f&r)	8,126	23.5	670	1.9	9,232	26.7	15,956	46.2	542	1.6	34,526	100.0
Low (≤30% f&r)	7,862	23.1	725	2.1	9,937	29.2	15,287	44.8	275	0.8	34,086	100.0
School type												
Elementary	12,595	24.0	967	1.8	13,787	26.3	24,347	46.5	685	1.3	52,381	100.0
Middle/secondary	5,803	21.1	567	2.1	7,104	25.8	13,797	50.1	288	1.0	27,559	100.0
Other	1,219	19.7	68	1.1	1,320	21.3	3,500	56.6	81	1.3	6,188	100.0

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Table IV-5: Comparison of the Number of School Districts Using Menu Planning Options, SYs 1996/97 and 1997/98

Menu planning system	School Food Purchase Study, SY 1996/97	State Agency Survey SY 1997/98	School District Survey SY 1997/98
	----------percent----------		
NSMP	16.5	16.2	19.8
ANSMP	3.1	1.9	3.4
Enhanced Food-Based	48.2	46.5	26.5
Traditional Food-Based	33.4	35.3	54.9
Other	1.8	0.9	1.2

Source: *School Food Purchase Study*, 1998 and *School Meals Initiative Implementation Study: First Year Report*, 2000.

Basis for Selection of Menu Planning System

All school districts are expected to have chosen a menu planning method by now and to at least be working toward its implementation. If the district has made no changes in how it plans its menus, in effect, it has chosen the Traditional Food-Based system. While these districts may continue to plan their menus on the basis of the old meal patterns, the meals they serve must meet the same nutritional objectives as all other schools. To do this, it is thought that most schools will ultimately have to modify their approach to menu planning along the lines of the changes represented by the Enhanced Food-Based system.

In recognition of the magnitude of change associated with implementation of the SMI, school districts have been encouraged by FNS to phase-in the program over time. They have also been encouraged to experiment with different approaches to menu planning. Thus, it is to be expected that districts will be found in all stages of implementation and that some districts will be trying more than one menu planning system.

At this relatively early stage of implementation, FNS is interested in knowing what factors have been instrumental in the choice of menu planning method. Respondents were asked to rate seven possible considerations from 1 (not at all important) to 5 (extremely important).

Average ratings based on the survey results for the choice of menu planning system used in elementary schools are displayed in Table IV-6. The ratings indicate that:

- A wide range of factors was considered, not just one or two.
- All seven factors listed in the question were considered relatively important.
- There is substantial uniformity of opinion as to the relative importance of these factors across all districts.
- Though differences in importance among factors were not large, "meal acceptability" ranked at the top, followed closely by "improvement in nutritional content," while "recommendations of others" was least important.

It would appear from these ratings that while school foodservice directors have to balance tradeoffs across a range of considerations, first and foremost they are boking for a menu planning system that will provide meals that are acceptable to their patrons while at the same time making these meals more nutritious. Furthermore, there are no apparent differences between districts that have chosen different menu planning systems. The largest differences (and they are not very large) are between districts using NSMP and the rest. The differences suggest that staff and facility considerations might have been less important to districts that chose NSMP. Or, conversely, that they were more important factors in the equation for these districts deciding to not go that route, including those that opted for ANSMP.

Table IV-6: Importance of Selected Considerations to Public NSLP School Districts in Choosing Menu Planning Method Currently Used in Elementary Schools by Selected District Characteristics, SY 1997/98

District characteristics	Time and labor requirements	Improvement in nutritional content	Acceptability of meals	Availability and/or cost of equipment	Staff experience	Staff skills	Recommendations of others
	average rating[1/]						
All districts	4.2	4.3	4.6	3.9	3.9	4.0	3.3
District size[2/]							
Less than 1,000	4.2	4.3	4.5	4.0	4.0	4.0	3.4
1,000 – 4,999	4.2	4.3	4.6	4.0	3.9	4.0	3.4
5,000 – 24,999	4.2	4.2	4.6	3.8	3.9	4.0	3.2
25,000 or more	4.3	4.3	4.7	3.8	3.9	4.0	3.0
Program participation							
NSLP and SBP	4.3	4.3	4.6	3.9	4.0	4.0	3.4
NSLP only	4.1	4.3	4.5	3.9	3.8	3.9	3.2
District poverty level[3/]							
High (>60% f&r)	4.3	4.5	4.6	4.0	4.2	4.2	3.5
Medium (31-60% f&r)	4.1	4.2	4.5	3.9	3.9	4.0	3.3
Low (≤30% f&r)	4.3	4.3	4.6	4.0	3.9	3.9	3.3
Menu planning method used							
NSMP	4.1	4.4	4.5	3.6	3.7	3.7	3.4
ANSMP	4.1	4.5	4.3	4.1	4.1	4.0	3.4
Enhanced food-based	4.2	4.2	4.5	3.9	3.9	3.9	3.2
Traditional food-based	4.3	4.3	4.6	4.0	4.0	4.1	3.3
Other	4.1	4.8	4.9	3.8	3.9	4.2	3.5

[1/] Based on rating system of 1 to 5 with 1= "not at all important" and 5= "extremely important."
[2/] Total school district enrollment as of October 31, 1997.
[3/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Implementation Status

Survey respondents were asked to assess their progress in implementation of the menu planning method they had chosen. They were asked to indicate their progress on a five-point scale that ranged from "have not started" to "fully implemented."

As noted before, although the survey was conducted in the second year of the SMI implementation (SY 1997/98), it was anticipated that most school districts would be somewhere short of full implementation. In addition to the early confusion over details of the menu planning options, the effective date of the regulations, and the opportunity for school districts to be granted two-year waivers, it was recognized that schools would require time to train their staffs and put all the necessary procedures in place. The State Child Nutrition Agencies, the principal source of training and technical assistance, would also require time to prepare for their new responsibilities (see Chapter VIII). The principal question, therefore, was how far toward full implementation had school districts come by SY 1997/98.

Just over one-third (34.8%) of all districts reported that their chosen system of menu planning had been fully implemented. Another one-quarter (26.3%) indicated that they had made substantial progress and were at least three-quarters implemented. Given the complexity of the process, to have achieved this level of implementation nationwide within two years should be considered a substantial accomplishment.

School districts with larger enrollments were somewhat more likely to have fully implemented their menu planning systems. Over half (52.9%) of those districts with 25,000 or more students reported that they were fully implemented. At the other extreme, a somewhat larger share of the smaller districts reported having not started or having barely started on implementation. Of those districts with an enrollment of less than 1,000 students, 8.5% said they had not started while another 13.4% said that they were still in the early stages of implementation, i.e. that they were at least one-quarter implemented.

When compared by the type of menu planning system they had selected, relatively few differences are noted among the four major methods. A somewhat larger share of traditional food-based districts (10.3%) reported that they had not started. Those relatively few districts that report that they are using a menu planning method other than the four prescribed methods report being furthest along in implementation. Of these districts, 59.5% said that they had achieved full implementation while another 21.5% were at least three-quarters implemented.

Table IV-7: Share of Public NSLP School Districts by Progress in Full Implementation of Chosen Menu Planning Method by Selected District Characteristics, SY 1997/98

District characteristics	Have not started	At least one-quarter implemented	At least half implemented	At least three-quarters implemented	Fully implemented
	percent				
All districts	6.7	12.3	19.9	26.3	34.8
District size[1/]					
Less than 1,000	8.5	13.4	19.2	25.0	33.9
1,000 – 4,999	6.4	12.0	20.5	27.2	33.8
5,000 – 24,999	2.9	10.0	20.9	28.1	38.1
25,000 or more	0.8	7.1	14.6	24.6	52.9
Program participation					
NSLP and SBP	6.4	13.0	19.9	25.6	35.2
NSLP only	7.8	10.1	20.0	28.6	33.5
District poverty level[2/]					
High (>60% f&r)	4.0	15.1	15.7	26.7	38.5
Medium (31-60% f&r)	6.0	13.2	20.7	26.2	33.9
Low (≤30% f&r)	8.3	10.5	20.7	26.3	34.2
Menu planning method used					
NSMP	2.8	14.6	19.5	34.4	28.8
ANSMP	0.0	5.5	28.2	28.9	37.2
Enhanced food-based	3.2	10.0	22.7	29.1	35.0
Traditional food-based	10.3	12.8	19.2	23.5	34.3
Other	2.5	10.4	6.7	21.5	59.5

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Future Intentions of Districts Using Food-Based Systems

Since the food-based menu planning systems closely resemble the approach that most schools used prior to the SMI, they are less demanding and more familiar to most school food directors. As a result, it is possible that some school districts have chosen to stay with a food-based system for the time being, but intend to eventually adopt NSMP once the wrinkles have been ironed out and once they and their staff are better prepared for the change.

Much of the documentation that is required for NSMP is also required of the districts using a food-based system. Thus, once food-based districts have developed the documentation that is required for their nutritional assessments (e.g. maintaining production records, developing and using standardized recipes, determining the nutritional content of commercially processed foods, etc.), they are a good way toward satisfying the conditions of NSMP. Furthermore, as foodservice directors become more familiar with NSMP and the advantages it offers in terms of speed and flexibility, their interest in adopting the method could be heightened.

To better gauge their intentions in this regard, those school foodservice directors that were using either of the two food-based systems or a menu planning system characterized as "other" were asked if they were currently:

- working toward implementation of NSMP
- planning to work toward implementation of NSMP
- not planning to work toward implementation of NSMP

Respondents were asked to indicate their intentions separately for elementary schools and middle/secondary schools since it is possible that NSMP might be implemented for one and not the other.

The responses indicate that about half of the districts that were using a food-based (or "other") menu planning system in SY 1997/98 planned to stay with that system while the other half were either working toward the adoption of NSMP or planned to work toward its adoption. The latter two groups were of approximately equal size.

Slightly more districts were working toward implementation of NSMP for elementary schools than for middle/secondary schools. Given the greater ease with which NSMP can be applied to younger children given the simpler menus and less frequent use of a la carte, this is not surprising.

The reported intentions of these districts with regard to their future use of NSMP are substantially the same across district size, poverty, and program participation categories. The one notable exception is the response of the largest districts, particularly with regard to the use of NSMP in middle/secondary schools. The largest districts are substantially more resistant to

the use of NSMP in their middle/secondary schools with over two-thirds (68.6%) of these districts saying that they do not plan to move in this direction.

Table IV-8: Intentions of Public NSLP School Districts Using Food-Based Menu Planning Systems to Work toward Implementation of Nutrient Standard Menu Planning for Elementary Schools by Selected District Characteristics, SY 1997/98

District characteristics	Working toward implementation		Planning to work toward implementation		Not planning to work toward implementation		All districts	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All districts	2,855	26.6	2,649	24.7	5,225	48.7	10,728	100.0
District size[1/]								
Less than 1,000	1,110	23.9	1,085	23.3	2,452	52.8	4,647	100.0
1,000 – 4,999	1,287	28.5	1,173	26.0	2,057	45.5	4,518	100.0
5,000 – 24,999	414	29.7	357	25.6	620	44.5	1,392	100.0
25,000 or more	44	25.6	33	19.2	95	55.2	172	100.0
Program participation								
NSLP and SBP	2,142	26.9	1,976	24.8	3,851	48.3	7,969	100.0
NSLP only	713	25.8	672	24.4	1,374	49.8	2,759	100.0
District poverty level[2/]								
High (>60% f&r)	367	22.0	416	24.9	886	53.1	1,668	100.0
Medium (31-60% f&r)	1,087	26.3	985	23.8	2,060	49.9	4,132	100.0
Low (≤30% f&r)	1,401	28.4	1,248	25.3	2,280	46.3	4,928	100.0

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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Table IV-9: Intentions of Public NSLP School Districts Using Food-Based Menu Planning Systems to Work toward Implementation of Nutrient Standard Menu Planning for Middle/Secondary Schools by Selected District Characteristics, SY 1997/98

District characteristics	Working toward implementation		Planning to work toward implementation		Not planning to work toward implementation		All districts	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All districts	2,299	23.9	2,324	24.2	4,980	51.9	9,603	100.0
District size[1/]								
Less than 1,000	743	21.4	803	23.2	1,918	55.4	3,464	100.0
1,000 – 4,999	1,175	25.6	1,152	25.1	2,258	49.2	4,585	100.0
5,000 – 24,999	354	25.6	341	24.7	686	49.6	1,382	100.0
25,000 or more	27	15.7	28	16.3	118	68.6	172	100.0
Program participation								
NSLP and SBP	1,780	24.4	1,776	24.4	3,726	51.2	7,281	100.0
NSLP only	519	22.4	549	23.6	1,254	54.0	2,322	100.0
District poverty level[2/]								
High (>60% f&r)	326	24.3	364	27.1	654	48.7	1,344	100.0
Medium (31-60% f&r)	902	24.3	818	22.1	1,985	53.6	3,705	100.0
Low (≤30% f&r)	1,072	23.5	1,142	25.1	2,341	51.4	4,554	100.0

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

If the number of districts that say they are either working toward or plan to work toward implementation of NSMP for at least some of their schools were to carry through with their plans, the number of NSMP districts would approximately triple. Even if one were to adjust for excessive optimism by cutting this number in half, the number of NSMP districts would nearly double from the present level to about 40% of all NSLP districts.

CHAPTER V: OPERATIONAL PROCEDURES USED IN IMPLEMENTING THE SMI MENU PLANNING OPTIONS

Introduction

Implementation of the SMI requires a number of changes in existing foodservice operating procedures and in some cases the adoption of entirely new procedures. The changes are generally greatest for those schools that have adopted NSMP or ANSMP though some changes are required of all schools, regardless of their choice of menu planning technique. Possible changes include: modification of the grade and age categories used in menu planning, the adoption of computerized systems for menu planning and nutrient analysis, the collection of new information for use in conducting nutrient analysis, changes in the choice of foods and preparation techniques, and increased attention to nutrition education. In this chapter, we review the extent to which school districts are making these changes and the progress they are making in their adoption.

Research Questions

In describing the operational procedures used in implementing the SMI menu planning options, the following research questions are addressed:

- To what extent are particular types of documentation required to conduct nutritional analysis routinely available to school food directors? Are there significant differences in availability by size of school district?
- To what extent do participating school districts use menu cycles? What is the average length and number? Are there significant differences in the use, length, and number of menu cycles by district characteristics?
- To what extent are school districts using fully standardized recipes and what share of their recipes are fully standardized? Are there significant differences in the use of standardized recipes by district characteristics?

- What grade and age categories are being used by those elementary and middle/secondary schools that are using NSMP or ANSMP in conducting nutrient analysis of their lunch menus?
- What grade categories are being used by those schools that are using food-based techniques in planning their lunch menus?
- Of the software systems approved by the USDA, which ones are being used in conducting nutrient analysis? To what extent are school districts that use food-based planning techniques using USDA-approved software?
- How many school districts weight foods on the basis of actual or planned servings in conducting nutritional analysis? Of these districts, how many exclude a la carte sales? Are there significant differences in the use of weighting or the exclusion of a la carte sales among districts with differing characteristics?
- For those school districts using ANSMP, which organizations are conducting the analysis, to what extent have these districts submitted menus and recipes to their State agencies, and how many have State approval of their menus?
- With what frequency has it been necessary for school districts using NSMP and ANSMP to re-analyze their menus and why has this re-analysis been necessary?
- For those school districts that are using a food-based approach to menu planning and do not conduct nutritional analysis, what steps are being taken to achieve the nutritional aims of the SMI?
- To what extent have school districts publicized the nutrient content of the meals they serve, what methods have been used, and toward which populations has the information been targeted?
- To what extent have school districts established other (optional) nutrition targets for their lunch and breakfast programs and of these how many have experienced difficulty in meeting them?

Availability of Documentation Needed for Nutrient Analysis

A variety of documentation is required before school meals can be analyzed for their nutritional content. This documentation includes the menus used, production records, number

of servings used for other than reimbursable meals, recipes used, and the nutritional content of commercially prepared foods.

Nutrient analysis is required for all school districts, regardless of the menu planning system that is being used. The only variation is in who performs the analysis and when. School districts using NSMP are required to conduct their own computerized nutrient analysis on a continuing basis. ANSMP districts have their menus analyzed on a continuing basis as well, though the analysis is conducted by another entity. Thus, assuming that all districts were fully operational in the menu planning system of their choice, about one-fifth of all districts would have been conducting their own nutrient analysis at the time of this survey. And, as a result, they would have confronted the need for this documentation.

School districts using food-based menu planning systems are not required to conduct their own nutrient analysis, though they are encouraged to do so. For those school districts that do not perform their own nutrient analysis, this analysis is conducted by their State Child Nutrition Agency (or its representative) at the time of their nutrition compliance review. Since these reviews are to be conducted only once every five years and in some States are just getting underway (see Chapter VIII), many school districts have not yet been required to have had their menus analyzed. As a result, some of these districts might not be familiar with the documentation that is required.

Survey results indicate that the required documentation is generally available.[1/] At least two-thirds of all districts reported that for 11 of the 17 items listed, the required documentation was routinely available for their schools. Aside from the relatively small share of districts (24.2%) that had printouts of their nutrient analysis (which would be expected mainly in NSMP and ANSMP districts, in any event), the greatest constraint in documentation is for numbers of a la carte, adult, and special meal servings. This information is required to ensure that the analysis is conducted only for those foods that are served in reimbursable meals. Overall, only 34.9% of all districts routinely have this information available.

It is possible that respondents have overestimated the availability of these data. A significant share of those districts not conducting their own nutrient analysis had not yet confronted a compliance review at the time of this survey. Thus, State reviewers might find the information incomplete or in a format that is difficult to use.

[1/] Since it was not possible to distinguish between the unavailability of the indicated documentation and a non-response to the question, imputations were not made for item non-response to this question. As a result, the indicated percentages could be slightly underestimated.

Another type of documentation that is often not available is information on the types of fats and oils used in the preparation of foods. Survey results indicate that this is routinely available in only about half of all school districts.

School district enrollment is positively associated with the availability of all types of documentation. This is consistent with the higher incidence of NSMP systems among the larger districts, indicating greater direct experience with the requirements of nutrient analysis.

Table V-1: Share of Public NSLP School Districts for which Documentation Used in Conducting Nutritional Assessments is Routinely Available by Type of Documentation and by Size of School District, SY 1997/98

Type of documentation	School district enrollment				All districts
	Less than 1,000	1,000 to 4,999	5,000 to 24,999	25,000 or more	
	percent[1/]				
Menus					
Complete set of menus	69.7	77.9	81.0	84.6	74.9
Production records					
Reimbursable meals forecast	41.3	60.2	69.4	73.8	53.5
Planned menu items	68.4	75.6	83.1	82.5	73.6
Serving sizes	67.9	77.7	81.9	86.3	74.2
Number of servings planned	64.8	72.1	78.1	81.3	70.0
Total amount of item prepared	71.9	81.9	86.9	85.4	78.3
Total amount of item left over	54.4	74.6	84.0	81.3	67.3
Comments on substitutions	38.4	52.2	62.9	66.7	48.0
Other meals					
Number of a la carte, adult, special meal servings	23.1	41.3	49.6	58.8	34.9
Standardized recipes					
Number of servings	69.7	75.7	82.7	85.0	74.2
Serving size	67.2	75.7	82.0	85.4	73.0
Ingredients	61.6	69.2	77.7	82.9	67.3
Measures/weights/packaging	63.3	69.3	78.8	83.8	68.2
Preparation procedures	60.8	69.4	78.4	82.5	67.2
Types of fats/oils used in preparation	49.6	48.7	54.5	57.5	50.0
Commercially processed products					
Nutritional content	58.1	63.3	76.4	80.4	63.2
Nutrient analysis					
Printout of nutrient analysis	16.9	25.6	38.0	60.8	24.2

[1/] Percent of districts within enrollment category.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Table V-2: Share of Public NSLP School Districts for which Documentation Used in Conducting Nutritional Assessments is Routinely Available by Type of Documentation and by Type of Menu Planning System, SY 1997/98

Type of documentation	Menu Planning System					All districts
	NSMP	ANSMP	Enhanced Food-based	Traditional Food-based	Other	
	percent[1/]					
Menus						
Complete set of menus	82.2	72.2	81.2	70.4	58.3	74.9
Production records						
Reimbursable meals forecast	61.5	26.9	58.5	51.1	36.2	53.5
Planned menu items	76.4	61.7	77.3	71.9	61.3	73.6
Serving sizes	80.5	69.8	78.9	70.4	56.4	74.2
Number of servings planned	75.0	62.8	71.5	68.0	51.5	70.0
Total amount of item prepared	80.9	75.1	84.1	76.1	56.4	78.3
Total amount of item left over	68.2	63.7	72.8	64.8	43.6	67.3
Comments on substitutions	48.4	33.0	50.8	46.5	39.9	48.0
Other meals						
Number of a la carte, adult, special meal servings	39.5	37.0	35.2	34.1	22.1	34.9
Standardized recipes						
Number of servings	80.0	58.8	81.0	70.8	63.2	74.2
Serving size	78.8	58.4	78.9	69.8	63.2	73.0
Ingredients	74.8	51.3	72.6	63.8	56.4	67.3
Measures/weights/packaging	72.6	49.8	72.2	65.9	50.3	68.2
Preparation procedures	73.1	54.6	72.9	63.9	50.3	67.2
Types of fats/oils used in Preparation	56.0	41.4	50.5	48.6	37.4	50.0
Commercially processed products						
Nutritional content	70.5	51.8	69.1	59.4	54.0	63.2
Nutrient analysis						
Printout of nutrient analysis	65.3	34.6	14.2	14.3	32.5	24.2

[1/] Percent of districts within menu planning system category.

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

A comparison of survey results tabulated by menu planning system indicates that availability of the required documentation is highest for NSMP and enhanced food-based school districts. This is not surprising in that districts applying these options must be proactive in assessing the nutritional implications of their menus.

This comparison is revealing in two other respects. First, it will be noted that a somewhat smaller share of ANSMP districts have access to this documentation in comparison to districts using other menu pla nning systems. For most types of documentation they rank even lower than those districts that are continuing to use the traditional food-based approach.

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Second, these findings indicate that districts using "other" menu planning systems are somewhat less likely to have ready access to the required documentation than districts using any of the other systems, with the possible exception of districts using ANSMP. Thus, it would appear that the relatively small share of all districts that are using either ANSMP or "other" systems are least well prepared for conducting nutritional assessments of their menus.

Use of Menu Cycles

Menu cycles are specified periods of time over which a standard set of menus is repeated. Menu planning is a demanding and time-consuming activity. It requires attention to food procurement, work schedules, variety, and seasonality. By establishing a set of menus that can be repeated on a regular basis, say every 4 or 5 weeks, it becomes possible to standardize the process. This, in turn, makes it possible to plan far more effectively and, for example, to forecast food requirements over an entire school year.

The requirement under the SMI that reimbursable meals meet certain nutritional standards has added another layer of complexity to menu planning. In addition to all the other considerations, program administrators must now develop menus that satisfy the SMI nutritional objectives over each 5-day school week. In effect, the SMI provides school districts with another incentive to use menu cycles. In the absence of menu cycles, it becomes necessary for school food directors to maintain more elaborate records and, for NSMP and ANSMP schools to more frequently conduct nutritional analysis.

Results of the NSMP Demonstration Evaluation indicated that requirements of the SMI provided a strong inducement for school districts to use menu cycles.[1/] Of 11 districts that had not used cycle menus prior to NSMP, 8 had adopted them by the end of the demonstration. The collective experience of these districts was that use of menu cycles "greatly facilitated NSMP because it created a finite number of menus to be analyzed."

Results of this study indicate that only 40% of all districts used menu cycles in SY 1997/98.[2/] Their frequency of use among the largest districts was about twice that of districts with an enrollment of less than 5,000. High poverty districts used menu cycles somewhat more than

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[1/] Fox, M.K., p. 6-16.

[2/] In response to another question, 36% of all districts reported that they had "never" used menu cycles (see Table VI-6). In combination, these results suggest that roughly one-quarter of all NSLP school districts might have used menu cycles in the past but were not using them in SY 1997/98.

low-poverty districts. The use of menu cycles among NSMP school districts was somewhat higher than average at 47%, but not dramatically higher.

For those school districts that use menu cycles, respondents were asked to report the length of the cycle (measured in days or weeks) and the number of cycle menus used for the school year. Separate responses were requested for elementary and middle/secondary schools. Responses to the length of cycle were all converted to a daily basis.

The average length of cycle ranged between 20 and 25 days. Nearly two-thirds of all districts using menu cycles use either a 4-, 5-, or 6-week cycle with the 4-week cycle the most popular.

The average number of different cycle menus for all districts was 3.7 per year for elementary schools and 3.5 per year for middle/secondary schools in SY 1997/98. These averages are pulled slightly higher by the fact that a few respondents reported having cycle menus in double digits. About 80% of all districts report having 1 to 3 cycles.

Table V-3: Use of Menu Cycles by Public NSLP School Districts by Grade Category and by Selected District Characteristics, SY 1997/98

District characteristics	Share of districts using menu cycles	Average length of cycle		Average number of cycle menus	
		Elementary	Middle/ Secondary	Elementary	Middle/ Secondary
	-------percent------	----------days----------		number per school year	
All districts	40.0	24.1	23.3	3.7	3.5
District size[1/]					
Less than 1,000	38.8	24.8	24.9	4.5	4.2
1,000 – 4,999	35.2	24.1	23.4	3.2	3.2
5,000 – 24,999	54.4	22.5	21.0	3.1	2.8
25,000 or more	73.3	22.9	19.9	2.6	2.5
Program participation					
NSLP and SBP	42.3	24.1	23.4	3.7	3.3
NSLP only	33.2	24.0	22.9	3.9	4.0
District poverty level[2/]					
High (>60% f&r)	50.5	23.1	22.1	4.9	4.2
Medium (31-60% f&r)	41.9	24.6	23.8	3.5	3.4
Low (≤30% f&r)	34.9	24.0	23.4	3.4	3.2

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Use of Standardized Recipes

Standardized recipes offer another means of standardizing menu planning and food preparation. A standardized recipe is one that has been tested and adapted for use so as to produce consistent results and yield when the same procedures, equipment, quantity and quality of ingredients are used. The advantages of using standardized recipes have long been recognized by school food professionals and therefore are widely used.

The adoption of nutritional standards and the need to evaluate menus against them provides further advantage to the use of standardized recipes. If standardized recipes are not used, either nutrient analysis must be conducted with greater frequency or its results become less reliable. Conversely, if standardized recipes are being used, once they have been incorporated in the database, nutritional analysis will be far less time-consuming. Thus, FNS is interested in knowing the extent to which standardized recipes are being used.

Survey results indicate that they are used quite extensively with 85% of all districts reporting their use for at least some recipes. Larger districts are somewhat more likely to use them than smaller districts. Nonetheless, over 80% of the districts in all size categories report their use. NSMP and ANSMP districts are also somewhat more likely to use standardized recipes than are districts using other menu planning systems.

Despite this, a majority of those districts reporting their use also indicate that not all of their recipes were standardized. Only about 21.7% reported that all of their recipes were standardized. (Among the largest districts this share was nearly twice as large at 43%.) The majority of users (58%) said that "most" of their recipes were standardized while 21% reported that "some" recipes were standardized.

It would appear that the majority of all school districts are reasonably well along in the development of standardized recipes. However, approximately one-third of all districts are either not using them or are using them to only a limited extent. Use of these recipes will therefore need to become more widespread if results of the nutrient analysis required under the SMI are to provide a reliable measure of program performance. Smaller districts in particular are likely to need help in the accomplishment of this task.

Table V-4: Share of Public NSLP School Districts Using Standardized Recipes by Selected District Characteristics, SY 1997/98

District characteristics	Share of districts using standardized recipes	Share of recipes fully standardized		
		All	Most	Some
	percent			
All districts	84.9	21.7	57.7	20.6
District size[1/]				
Less than 1,000	83.0	21.0	56.5	22.5
1,000 – 4,999	84.3	19.8	60.0	20.2
5,000 – 24,999	92.1	26.4	56.0	17.5
25,000 or more	90.0	42.6	48.6	9.3
Program participation				
NSLP and SBP	85.9	23.1	56.6	20.3
NSLP only	81.8	17.2	61.4	21.4
District poverty level[2/]				
High (>60% f&r)	86.9	26.7	54.8	18.5
Medium (31-60% f&r)	87.7	24.8	55.9	19.4
Low (≤30% f&r)	81.9	17.1	60.5	22.4
Menu planning method used				
NSMP	90.9	35.8	50.8	13.4
ANSMP	92.7	26.6	63.7	9.7
Enhanced Food-based	88.4	16.0	59.1	24.9
Traditional Food-based	81.3	20.0	58.5	21.5
Other	80.4	28.2	61.8	9.9

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Use of Grade/Age Categories

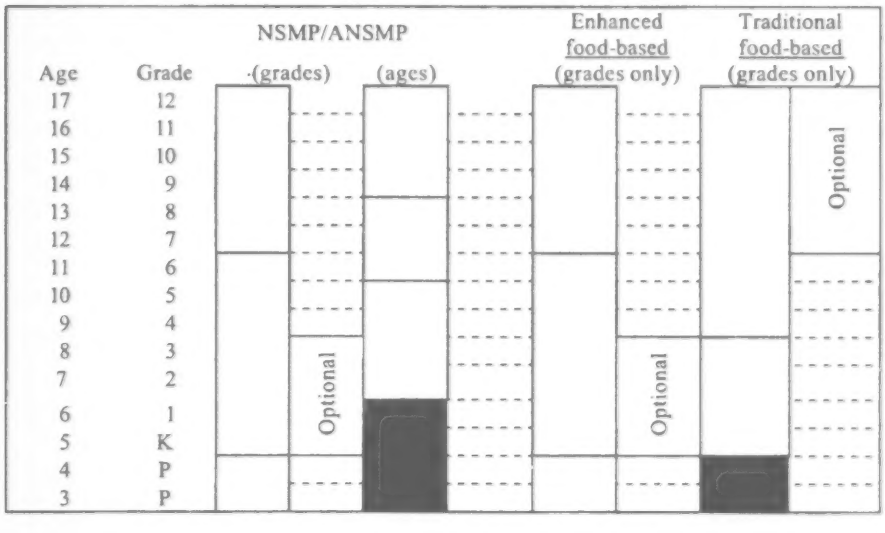
Since children of different ages have different nutritional requirements, it is necessary to customize menus to as many different grade/age groups as practical. At a minimum, USDA encourages kindergarten through 12th grade (K-12) schools to develop menus for at least two groups. For NSMP and enhanced food based schools, the divisions are K-6 and 7-12. Though it is not required, USDA encourages a further division of K-6 into K-3 and 4-6 (Figure V-1).

Traditional food-based districts are encouraged to divide K-12 schools into K-3 and 4-12 with an option to further divide the latter into 4-6 and 7-12.

Schools using NSMP are also permitted to use age groups instead of grade groups, if they prefer. Four established age groups are built into USDA-approved software for this purpose. They are: ages 3-6, 7-10, 11-13, and 14 and older. NSMP schools are also permitted to develop customized age groups. With a computerized menu planning system, this can be achieved with relative ease.

In practice, schools report using many different grade/age groupings as the basis for their menu planning. In part, this is an artifact of school district organization and the multiplicity of grade groupings that are found among and within schools. Within the same school district, it is not unusual to find several different grade groupings. Among the school districts using NSMP, more than 50 different grade groupings and more than 45 age groupings were reported. Among the food-based schools, a comparable number of grade groupings were reported.

Figure V-1: Grade/Age Categories by Menu Planning Option, SY 1997/98



The diversity of the groupings used are evident from Tables V-5 and V-6. Among the NSMP and ANSMP schools, 81% conduct their nutritional analysis on the basis of grade groups. Of these, K-6 and K-5 are used with greatest frequency. Of the age groupings in NSMP and ANSMP schools, 5-10 and 7-10 are in greatest use, though neither of these categories account for as many as 4% of the total number of schools. Within the food-based schools, the grade categories in greatest use are K-6, K-12, and K-5. The relatively large share (18%) of all

food-based systems that report planning their meals on a K-12 basis raises questions regarding their compliance with program requirements.

Table V-5: Number of NSMP/ANSMP Schools by Grade and Age Categories Used in Conducting Nutrient Analysis of Lunch Menus, SY 1997/98

Grade/age categories	Number of schools	Percent of total
Grade groupings		
PK-5	366	2.0
K-4	218	1.2
K-5	1,917	10.5
K-6	3,514	19.2
K-8	583	3.2
K-12	503	2.8
1-5	216	1.2
1-6	209	1.1
6-8	476	2.6
6-12	649	3.6
7-12	1,511	8.3
9-12	659	3.6
Other	3,932	21.5
Total	14,753	80.7
Age groupings		
3-6	201	1.1
5-10	633	3.5
5-11	309	1.7
5-12	83	0.5
7-10	613	3.4
11-13	310	1.7
11-14	118	0.6
11-17	140	0.8
14-17	241	1.3
Other	873	4.8
Total	3,521	19.3
Grand Total	18,274	100.0

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000
Note: Does not include imputations for nonresponses; 30% of NSMP/ANSMP school districts did not respond to this question.

Table V-6: Number of Food-Based Menu Planning Schools by Grade Categories Used in Planning Lunch Menus, SY 1997/98

Grade/age categories	Number of schools	Percent of total
K	923	1.9
K-2	447	0.9
K-3	809	1.7
K-4	591	1.2
K-5	6,783	14.2
K-6	8,837	18.5
K-8	1,211	2.5
K-12	8,576	18.0
1-12	281	0.6
3-5	266	0.6
3-6	182	0.4
4-12	574	1.2
6-8	1,927	4.0
6-12	1,934	4.1
7-8	471	1.0
7-12	3,335	7.0
9-12	3,449	7.2
10-12	144	0.3
All other	7,009	14.7
Total	47,749	100.0

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000
Note: Does not include imputations for nonresponses; 27% of food-based school districts did not respond to this question.

Use of Weighting

To ensure that menu components are appropriately credited in conducting nutritional analysis, foodservice personnel were instructed in the initial phase of the SMI to maintain food production records and to assign weights to menu components on the basis of each component's relative importance measured in terms of actual or planned servings. If twice as many servings of pizza are plated as baked chicken, for example, pizza should be accorded twice as much weight in calculating the nutritional content of the menu. Furthermore, to the extent that the same menu items included in a reimbursable meal are also offered for sale as an a la carte item, the portion that is sold a la carte must be excluded from the calculation of these weights.

The initial regulations required NSMP and ANSMP schools to assign weights in conducting nutritional analysis. As the range of menu planning options was enlarged to include food-based techniques, schools using the newly added approaches were encouraged but not required to assign weights in conducting nutritional analysis. From the beginning, this was viewed by many as one of the most burdensome requirements of the program. The Department received nearly 3,000 public comments (most of them negative) in response to the original proposed rule. However, absent some better way of ensuring the accuracy of the records on which the nutrient analysis was conducted, the Department retained this requirement.

The problems associated with obtaining menu production information for use in assigning weights were also evident in the NSMP demonstration. Not only did it top the list in terms of being considered a "significant burden" among the SFAs that completed the demonstration, but was cited by 8 of 11 SFA directors that dropped out of the demonstration as a prime reason for dropping out.[1/]

In recognition of the burdensomeness of this requirement and the possibility that there are other ways to accomplish the same objective, the USDA authorized the granting of temporary waivers through State child nutrition agencies. These waivers were authorized through SY 1999/2000. This action was followed by a provision in the Child Nutrition Reauthorization Act of 1998 that prohibits USDA from requiring the use of weighted analysis for nutrient analysis of school meals through SY 2002/03, although States can still impose the requirements.

Since the latter waivers had not yet been adopted at the time this survey was conducted, those respondents that conducted nutritional analyses were asked about their use of weighting. The results indicate that a majority of these districts, 77.6%, were assigning weights (Table V-7). The NSMP/ANSMP schools were slightly more likely than the food-based schools to use weights. This was particularly true among the larger school districts. Within the largest size class, a substantially larger share of NSMP/ANSMP districts used weighting compared to the food-based districts. In part this could be due to the greater ease of using weights with a computerized operation while the food-based districts are somewhat more dependent on hand calculations for their nutrient analysis.

[1/] M.K. Fox, p. 7-9

Table V-7: Share of Public NSLP School Districts that Weight Foods on the Basis of Actual or Planned Servings in Conducting Nutritional Analysis, by Menu Planning System and by Selected District Characteristics, SY 1997/98

District characteristics	Food-based menu planning districts	NSMP/ANSMP planning districts	All districts
	percent		
All districts	74.9	80.8	77.6
District size[1/]			
Less than 1,000	80.6	77.2	78.9
1,000 – 4,999	77.4	85.3	80.7
5,000 – 24,999	60.9	79.5	69.6
25,000 or more	46.0	81.8	59.6
Program participation			
NSLP and SBP	74.2	82.5	78.0
NSLP only	77.5	75.3	76.5
District poverty level[2/]			
High (>60% f&r)	70.4	71.1	70.8
Medium (31-60% f&r)	74.9	82.2	78.4
Low (≤30% f&r)	76.4	83.2	79.3

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

NSMP/ANSMP respondents that applied weights in conducting their nutrient analysis were also asked if they excluded the a la carte food sales of those food items that were also components of reimbursable meals. Their responses indicate that about 74% of all districts do exclude a la carte sales from the calculation and that this share is relatively uniform across districts.

Table V-8: Number of Public NSLP School Districts Using NSMP/ANSMP Planning Systems that Weight Foods on the Basis of their Relative Importance, SY 1997/98

District characteristics	School districts that weight foods on basis of relative importance			
	Number	Percent of total	School districts that exclude a la carte sales	
			Number	Percent of total
All districts	2,478	80.8	1,831	73.9
District size[1/]				
Less than 1,000	1,022	77.2	713	69.8
1,000 – 4,999	1,012	85.3	747	73.8
5,000 – 24,999	381	79.5	318	83.5
25,000 or more	63	81.8	52	82.5
Program participation				
NSLP and SBP	1,958	82.5	1,453	74.2
NSLP only	520	75.3	378	72.7
District poverty level[2/]				
High (>60% f&r)	349	71.1	255	73.1
Medium (31-60% f&r)	1,086	82.2	792	72.9
Low (≤30% f&r)	1,043	83.2	784	75.2

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Re-Analysis Requirements

In the early phases of SMI implementation, school districts will probably have to re-analyze their menus from time-to-time. Not only will school food personnel be learning how to apply new menu planning tools, but changes in food availability and cost as well as changes in student preferences will be occurring too. This is especially likely for those school districts that are using NSMP and ANSMP.

To better understand how school districts were coping with this problem, NSMP and ANSMP districts were asked if re-analysis of their menus had been required and if so, why and with what frequency. Their responses are summarized in Tables V-9 and V-10.

The majority of all districts reporting (83.4%) indicated that they had to re-analyze their menus. The larger the district the more likely that re-analysis had been required. No single explanation dominated as a reason for re-analysis, though the achievement of nutritional

targets was the most frequently cited reason, especially among larger districts. Of all NSMP districts, 60.4% identified this as a reason for re-analysis.

Table V-9: Need for Re-Analysis of Menus by Public NSLP School Districts Using NSMP/ANSMP, SY 1997/98

District characteristics	Re-analysis not required	Re-analysis required due to:				
		Ingredients/ foods not available	Change in student preferences	Cost of ingredients/ foods	Incremental move toward targets	To achieve overall targets
	----------percent of all NSMP/ANSMP school districts----------					
All districts	16.6	32.1	43.3	28.1	50.0	60.4
District size[1/]						
Less than 1,000	21.5	32.1	37.0	28.3	47.1	56.8
1,000 – 4,999	13.9	30.5	47.1	27.8	51.4	60.8
5,000 – 24,999	11.3	35.9	49.5	27.8	52.6	66.8
25,000 or more	6.5	31.2	51.9	28.6	63.6	76.6
Program participation						
NSLP and SBP	17.6	31.7	43.7	28.6	50.3	60.2
NSLP only	13.3	33.3	42.0	26.5	49.3	61.1
District poverty level[2/]						
High (>60% f&r)	22.2	32.6	38.5	34.4	52.1	54.0
Medium (31-60% f&r)	16.4	35.0	42.3	24.4	49.6	66.1
Low (≤30% f&r)	14.6	28.8	46.2	29.4	49.8	56.9

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

A related motive, to incrementally move toward the attainment of nutritional targets, was the next most frequently mentioned reason. Half of all NSMP districts cited it; and again with higher frequency among larger districts.

In response to being asked how often any of their menus had required re-analysis of their nutritional composition, a large majority indicated monthly. For many districts, this corresponds with the length of their menu cycle. The responses of the remaining districts varied widely, ranging from weekly to annually.

In combination, these responses indicate that most NSMP and ANSMP districts are re-analyzing their menus on a timely basis and that they are largely focused on the achievement of nutritional targets in doing so.

Table V-10: Frequency with Which Re-Analysis of Menus Has Been Required for Public NSLP School Districts Using NSMP/ANSMP, SY 1997/98

District characteristics	Re-Analysis not required	Re-analysis required:						
		Weekly	Biweekly	Monthly	Quarterly	Semester	Semi-annually	Annually
	percent of all NSMP/ANSMP school districts[1/]							
All districts	16.6	3.4	1.5	32.1	7.1	2.8	3.4	3.2
District size[2/]								
Less than 1,000	21.5	4.0	1.3	22.8	4.1	2.3	1.7	3.6
1,000 – 4,999	13.9	2.9	2.4	37.5	6.7	2.3	3.5	3.3
5,000 – 24,999	11.3	3.3	0.4	42.1	15.5	4.8	6.2	1.7
25,000 or more	6.5	3.6	0.0	48.7	12.5	7.4	14.7	3.4
Program participation								
NSLP and SBP	17.6	3.6	1.7	31.9	8.3	3.2	4.4	3.1
NSLP only	13.3	3.0	1.1	33.1	2.8	1.6	0.0	3.6
District poverty level[3/]								
High (>60% f&r)	22.2	0.7	2.0	32.1	3.6	2.5	1.4	2.3
Medium (31-60% f&r)	16.4	5.7	1.9	29.5	8.1	2.5	4.1	3.0
Low (≤30% f&r)	14.6	2.1	0.9	34.9	7.4	3.3	3.5	3.7

[1/] Percentages do not add to 100% due to exclusion of non-responses.
[2/] Total school district enrollment as of October 31, 1997.
[3/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Computer/Computer Software Used

At the time the survey instrument for this study was developed in late 1996, the USDA had approved 15 software systems for use in conducting nutrient analysis. This was up from only three approved systems at the time of the start of the NSMP demonstration two years before.

Respondents to the survey who indicated they were conducting nutrient analysis (or, in the case of ANSMP schools, nutrient analysis was being conducted on their behalf) were asked which of the approved software systems they were using. The question was asked of all respondents, whether they were using food-based or nutrient standard systems, as long as they

were conducting nutrient analysis. Those NSMP and ANSMP districts that were using more than one system were also asked to identify which one they considered their primary system. Their responses are summarized in Table V-12.

Of the 15 software systems identified, NUTRAKIDS by Lunch Byte Systems was the most popular by a wide margin. Of all food-based systems that reported using software to conduct nutrient analysis, 75% used NUTRAKIDS while 85% of all NSMP/ANSMP districts using software used the same program. Of the other software systems, those most frequently mentioned were: School Nutrition Accountability Program (SNAP), Keeping TRAC Software, Computer Assisted Food Service (CAFS), and Horizon Software (BOSS).

It will be noted that over 3,600 school districts that are using food-based (or "other") menu planning systems report that they are conducting nutrient analysis. This is the equivalent of one-third (33.1%) of the total number of food-based districts. From these results, it would appear that about half of these districts are using a combination of computer software and hand calculations.

Table V-11: Food-based Menu Planning School Districts that are Conducting Nutrient Analysis

District characteristics	Number of districts	Share of all food-based districts	Share of all districts
	------Number------	----------percent----------	
All districts	3,615	33.1	26.8
District size[1/]			
Less than 1,000	1,278	27.2	22.0
1,000 – 4,999	1,663	35.9	29.6
5,000 – 24,999	548	38.7	30.1
25,000 or more	126	73.3	52.5
Program participation			
NSLP and SBP	2,793	34.6	27.6
NSLP only	822	28.9	24.2
District poverty level[2/]			
High (>60% f&r)	521	31.2	24.8
Medium (31-60% f&r)	1,418	34.1	27.0
Low (≤30% f&r)	1,676	32.9	27.2
Menu planning system[3/]			
Enhanced food-based	1,041	29.1	29.1
Traditional food-based	2,560	34.6	34.6
Other	80	52.3	49.1

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
[3/] Some school districts use more than one menu planning system.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Table V-12: Software Systems Used by Public NSLP School Districts in Conducting Nutrient Analysis by Type of Menu Planning System, SY 1997/98

Software system	Food-based planning systems		NSMP/ANSMP systems		All districts	
	Number of districts	Percent of total	Number of districts	Percent of total	Number of districts	Percent of total
Bon Appetit Software, Inc.	39	1.1	5	0.2	44	0.6
CLM Group, Inc.	0	0.0	6	0.2	6	0.1
Comalex, Inc.	0	0.0	18	0.6	18	0.3
CompuHELP	16	0.4	0	0.0	16	0.2
Computer Assisted Food Service (CAFS)	81	2.2	53	1.7	134	1.9
Computrition, Inc.	17	0.5	20	0.7	37	0.5
Horizon Software (BOSS)	51	1.4	76	2.5	127	1.8
Keeping TRAC Software	131	3.6	48	1.6	179	2.5
Lunch Byte Systems (NUTRIKIDS)	1,671	46.2	2,490	81.2	4,161	59.0
Nutri-Comp Software System (RECIPE EXPRESS)	17	0.5	41	1.3	58	0.8
PCS Revenue Control Systems, Inc.	63	1.7	27	0.9	90	1.3
School House Software	18	0.5	0	0.0	18	0.3
School Lunch Computer Services, Inc. (Lunch Cruncher)	15	0.4	0	0.0	15	0.2
School Nutrition Accountability Program (SNAP)	168	4.6	133	4.3	301	4.3
Superior/Accu-Scan	18	0.5	56	1.8	74	1.0
Unknown software	154	0.3	98	3.2	252	3.6
Calculated by hand	1,379	38.1	142	4.6	1,521	21.6
Total number conducting nutrient analysis	3,615	100.0	3,065	100.0	7,051	100.0

Note: Since a small number of school districts are using both nutrient standard menu planning and food-based menu planning systems, there is some duplication in these numbers. It will be noted that a number of school districts, particularly districts using a food-based system, report using more than one method.

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Status of ANSMP School Districts

As described earlier, a relatively small share of all districts (3.4%) has chosen the Assisted Nutrient Standard Menu (ANSMP) approach. In part, the lack of interest in this approach could be due to the lack of support school districts are receiving from many of the State child nutrition agencies (see Chapter VIII). At the time of the State agency survey in SY 1997/98, only 15 of the 50 agencies were prepared to provide this support and systems were operational in only 12 of the 15 States. As additional States develop the capability and procedures to provide this support and as other institutions (public and private) begin offering these services, the ANSMP approach is likely to grow in popularity.

As indicated in Table V-13, those school districts using ANSMP were receiving their analytic support from a wide range of sources in SY 1997/98. While State agencies were the leading source of support (34.7%), many districts were getting help from food service management companies (17.6%), other school districts (13.6%), consultants (14.2%), and a combination of other sources (19.8%).

At the time of the survey, just over half (52.3%) of all ANSMP districts had submitted their menus and recipes to their State agencies for approval. This relatively low share is probably indicative of the early stage of implementation of most of these districts. Of those districts that had submitted their menus and recipes, nearly all had been approved.

Table V-13: Status of Public NSLP School Districts Using Assisted Nutrient Standard Menu Planning, SY 1997/98

District characteristics	Districts using ANSMP									
	Number	Analysis conducted by:					Districts that have submitted menus and recipes to State agency			
		State agency	Another school district	Consultant	Food service mgt. company	Other	Number	Percent of total	Districts with approved menus	
									Number	Percent of total
	(number)	(percent)					(number)	(percent)	(number)	(percent)
All districts	426	34.7	13.6	14.2	17.6	19.8	223	52.3	216	96.9
District size[1/]										
Less than 1,000	235	45.9	11.6	9.3	6.4	26.7	148	63.0	146	98.6
1,000 – 4,999	152	19.5	20.3	17.8	33.1	9.3	58	38.2	53	91.4
5,000 – 24,999	35	22.6	0.0	32.3	25.8	19.4	15	42.9	15	100.0
25,000 or more	5	60.0	0.0	0.0	0.0	40.0	2	40.0	2	100.0
Program participation										
NSLP and SBP	336	31.0	10.5	16.7	17.4	24.4	177	52.7	171	96.6
NSLP only	90	49.2	26.2	4.6	18.5	1.5	45	50.0	45	100.0
District poverty level[2/]										
High (>60% f&r)	97	38.5	0.0	59.6	1.9	0.0	49	50.5	48	98.0
Medium (31-60% f&r)	161	63.8	5.5	6.3	11.0	13.4	91	56.5	85	93.4
Low (≤30% f&r)	169	7.6	25.5	4.8	29.7	32.4	83	49.1	82	98.8

[1/] Total school district enrollment as of October 31, 1997.

[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Steps Taken by Food-Based Districts Not Conducting Nutritional Analysis

Those school districts that are using a food-based menu planning system are not required to conduct nutritional analysis, though they are encouraged to do so. As survey results described earlier indicate, around one-third of the districts using food-based systems are conducting nutritional analyses in some manner. In many cases, this analysis is being conducted by hand although a significant number of food-based systems are also using computers and USDA-approved software.

For those food-based systems that are not conducting nutritional analysis, the Department is interested in knowing what steps they are taking to ensure that the meals they are serving meet the Dietary Guidelines. For districts using the enhanced food-based systems this is of somewhat less concern in that the prescribed meal patterns have been designed to at least assist districts in the achievement of the Dietary Guidelines. School districts using the traditional food-based system, on the other hand, are left to their own designs to make the changes necessary to achieve the Dietary Guidelines.

In the absence of conducting nutritional analysis, it would appear that most school districts are following a combination of techniques to improve the nutritional content of their menus. Only 6.4% of these districts report that they have made no changes at all. Around 80% indicate that they are:

- offering additional servings of more nutritious foods;
- substituting more nutritious foods and ingredients; and
- using more nutritious preparation techniques.

It appears that these steps are being taken among districts of all sizes and types. There is a slight tendency for smaller districts to focus more on changes in their preparation techniques while larger districts give more attention to substituting more nutritious foods and ingredients and offering additional servings of more nutritious foods.

These results suggest that even those school districts that have been least proactive in their choice of menu planning options and have declined to conduct nutritional analysis of their menus, are taking steps to improve the nutritional content of their menus.

Table V-14: Steps Taken by Public NSLP School Districts Using Food-Based Menu Planning Systems that do not Conduct Nutritional Analysis to Achieve Dietary Guidelines, by Selected District Characteristics, SY 1997/98

District characteristics	Offer additional servings of more nutritious foods	Substitute more nutritious foods and ingredients	Use more nutritious preparation techniques	No changes made
	percent			
All districts	77.3	77.0	81.1	6.4
District size[1/]				
Less than 1,000	73.6	76.7	80.3	7.1
1,000 – 4,999	79.5	76.4	81.1	6.0
5,000 – 24,999	83.1	79.8	84.4	4.8
25,000 or more	90.6	93.0	80.8	4.9
Program participation				
NSLP and SBP	79.4	76.1	81.8	5.9
NSLP only	71.7	79.6	79.2	7.5
District poverty level[2/]				
High (>60% f&r)	81.1	73.9	80.6	6.6
Medium (31-60% f&r)	76.6	82.5	85.9	3.6
Low (≤30% f&r)	76.5	73.7	77.4	8.5

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Publicizing the Nutrient Content of Menus

Providing nutrition information and education to students and their parents is a key element of the SMI. After all, it is the nutritional well being of school-age children that is of ultimate concern to this program. These children (and, indirectly their parents) have the most at stake in its operation and success. Furthermore, if the program is to have lasting impact, it must influence consumer behavior beyond the schoolyard and beyond the years a child is in school.

School food directors participating in the survey were asked if they publicized the nutrient content of their meals and, if so, through what method and toward whom was it targeted. The findings indicate that the majority of all districts (82.5%) do not publicize the nutrient content of their meals, though a substantially larger share of districts using nutrient standard menu

planning do so compared to those using the food-based systems (36.3% versus 12.4%). Given the relative ease with which the nutrient content of meals can be generated for those districts using a computerized system of nutrient analysis, it is not surprising that proportionately more of them are publicizing this information.

Those districts that publicize nutrient content generally do it broadly, aiming the information both at students and their parents. A significant minority also makes the information publicly available. A combination of methods is generally used. Handouts and informational postings are most frequently used.

Table V-15: Number of Public NSLP School Districts that Publicize the Nutrient Content of Meals Served by the Methods Used and Type of Menu Planning System, SY 1997/98

Extent/method	Districts using food-based menu planning systems		Districts using NSMP/ANSMP		All districts[1/]	
	Number	Percent	Number	Percent	Number	Percent
Extent publicized:						
All schools publicize	710	6.5	703	22.9	1,385	10.2
Some schools publicize	641	5.9	411	13.4	1,001	7.3
No schools publicize	9,575	87.6	1,951	63.7	11,253	82.5
Total	10,926	100.0	3,065	100.0	13,639	100.0
Methods used:[2/]						
Informational postings	583	43.2	667	59.9	1,250	52.4
Handouts	611	45.2	694	62.3	1,305	54.7
Labels in cafeteria	518	38.3	293	26.3	811	34.0
T.V.	67	5.0	27	2.4	94	3.9
Computer	67	5.0	59	5.3	126	5.3
Verbally	487	36.0	390	35.0	877	36.8
Toward whom targeted:[2/]						
Parents	976	72.2				
Students	1,177	87.1				
Public	515	38.1				

[1/] Since some school districts report using both food-based and nutrient standard menu planning techniques, there is some duplication in the "all districts" column.

[2/] Percentages based on the number of school districts having at least some school districts that publicize the nutrient content of their meals.

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

CHAPTER VI: IMPACT OF THE SCHOOL MEALS INITIATIVE

Introduction

The ultimate purpose of the School Meals Initiative is to improve the nutritional intake of children taking part in the school meals programs of elementary and secondary schools. Since the measurement of food intake is beyond the scope of this study, we instead focus here on the effects of the SMI on a variety of operating measures and procedures.[1/] These findings provide an early indication of the extent to which the changes required by the Initiative have been accepted by school food authorities and are in use. The results of this study also indicate where school districts are having trouble with the SMI as well as where the program might be having unintended consequences.

The success of the SMI will be highly dependent on its acceptance by the school food community. This acceptance, in turn, will depend on the practical feasibility of the program as it is being implemented at the local level. It is doubly important, therefore, that any drawbacks to the program's operation be identified at the outset.

Research Questions

A wide range of possible impacts of the SMI on school food operations is examined in this Chapter, including the following:

- To what extent are those school districts that are implementing NSMP or ANSMP having trouble meeting specific nutritional objectives? To what degree have menu changes been required? Have there been changes in the amount of time spent on menu planning? Have there been changes in a la carte food sales?
- To what extent have there been changes in specific menu related features of district programs since the start of SMI? To what extent have there been specific changes in food preparation and procurement practices following the adoption of SMI?

[1/] Another study, the *School Nutrition Dietary Assessment Study II*, for which data are being collected during SY 1998/99, will assess the impact of the SMI on nutritional intake.

- How do school districts using NSMP or ANSMP view the level of burden associated with specific implementation tasks?
- To what extent do foodservice directors believe that there have been changes in program costs, food waste, program acceptance, number of food choices, portion size, and the number of a la carte items offered since implementation of the SMI?
- To what extent have school districts experienced difficulty in performing specific tasks associated with implementation of the SMI?
- What is the overall attitude of major stakeholders in the school food program toward the SMI? What is the overall attitude of school food directors toward the SMI?

Impact of NSMP/ANSMP

Ease of Implementing NSMP

For a list of 14 tasks required in implementing NSMP, school food directors were asked whether they considered the performance of these tasks a "significant burden," "minor burden," or "not a burden." A similar question was asked of the 23 school districts participating in the NSMP demonstration in the Spring of 1997. Six of the 23 demonstration districts reported that none of the tasks posed an undue burden. The majority of districts, however, reported that several of the tasks imposed a significant burden.

The task that was most frequently identified by the demonstration districts as imposing a significant burden was that of obtaining menu production information for purposes of assigning weights in conducting nutrient analysis. Fourteen of the 23 directors (60.9%) found this to be a significant burden. Larger SFAs taking part in the demonstration were substantially more likely to find this task burdensome. As indicated elsewhere, eight of the 11 school districts that dropped out of the demonstration cited this requirement as influencing their decision to leave the demonstration.

The other implementation tasks that were viewed as posing a significant burden by the demonstration districts were those associated with (a) entering and analyzing recipes (47.8%) and (b) developing standardized recipes (43.5%). Since nine of the 34 school districts that were initially part of the demonstration had dropped out by this point, it is likely that these

results underestimate the level of burden, as seen by the school food directors implementing NSMP.

Results of this survey generally correspond with those observed in the demonstration study, though fewer than 2% of the respondents indicated that none of the tasks was a burden. Four of the tasks were identified by a majority of the respondents as posing a "major burden." They are:

- entering and analyzing recipes (64.5%)
- obtaining missing nutrient information (63.2%)
- entering and analyzing menus (59.6%)
- obtaining information for weighted analysis (50.4%)

It will be noted that work on the first three of these tasks is highly concentrated in the start-up phase of implementing nutrient standard menu planning and should drop sharply once the menu planning process is in place.

A majority of the respondents characterized each of the ten remaining tasks a "minor burden." For many of these tasks, there was a clear difference of opinion with more directors reporting that there was "no burden" than that the task was a "major burden."

There are some differences in how school foodservice directors' view the burden associated with these tasks, depending on the size of the school district. For those tasks that all districts find most burdensome, including the four listed above, directors of the smallest districts find them somewhat more burdensome than do directors in larger districts, particularly the largest districts. For example, 68.2% of the smallest districts' report that it is a major burden to secure missing nutrient information while only 33.8% of the largest districts characterize this task as a major burden.

The relationship between district size and level of burden reverses for those tasks that are viewed as less burdensome overall. This is particularly evident for those tasks that involve the training or retraining of staff. For example, the retraining of staff to identify reimbursable meals was viewed as a major burden by 27.3% of the largest districts but by only 9.5% of the smallest districts. In general, those tasks that are affected by district size are, not surprisingly, more onerous for the larger districts while those tasks that are less affected by scale and more affected by technical requirements are more of a challenge for the smaller districts.

Table VI-1: Extent to Which Tasks Required in Implementing Nutrient Standard Menu Planning Have Been a Burden to Participating Public NSLP School Districts, by Size of District, SY 1997/98

Task	District size												All districts		
	Less than 1,000			1,000 – 4,999			5,000 – 24,999			25,000 or more					
	Major burden	Minor burden	No burden	Major burden	Minor burden	No burden	Major burden	Minor burden	No burden	Major burden	Minor burden	No burden	Major burden	Minor burden	No burden
	(percent)														
Developing standardized recipes	32.4	59.0	8.5	21.7	62.9	15.4	21.3	55.3	23.4	39.0	29.9	31.2	26.7	59.2	14.1
Entering/analyzing recipes	69.8	25.0	5.1	60.6	32.2	7.2	59.5	30.5	10.0	62.3	29.9	7.8	64.5	28.8	6.8
Planning menus	30.6	53.8	15.6	23.6	55.1	21.3	26.9	51.8	21.3	20.5	50.0	29.5	27.1	53.9	19.0
Obtaining information for weighted analysis	60.7	31.4	7.9	39.9	47.5	12.6	47.5	42.9	9.6	53.2	29.9	16.9	50.4	39.4	10.2
Entering/analyzing menus	60.6	27.3	12.1	59.0	30.6	10.4	60.5	25.9	13.6	43.6	44.9	11.5	59.6	28.8	11.6
Obtaining missing nutrient information	68.2	26.9	4.9	61.2	31.4	7.4	59.2	34.4	6.5	33.8	50.6	15.6	63.2	30.4	6.4
Providing specifications for purchased foods	30.5	63.4	6.0	19.7	62.6	17.7	18.2	62.2	19.6	14.5	50.0	35.5	24.0	62.6	13.4
Monitoring to ensure that specifications are met	14.2	76.5	9.3	15.8	61.0	23.2	18.2	59.3	22.5	13.0	51.9	35.1	15.4	67.2	17.4
Training foodservice staff	16.3	64.9	18.8	21.2	58.2	20.7	24.6	54.9	20.5	28.6	58.4	13.0	19.8	60.6	19.6
Entering product information	21.5	70.4	8.1	32.0	51.8	16.2	33.4	43.6	23.0	35.9	44.9	19.2	27.8	58.3	13.8
Selecting appropriate items from database	8.9	78.5	12.6	14.0	66.7	19.3	11.3	58.2	30.5	10.3	69.2	20.5	11.3	70.5	18.2
Retraining staff to identify reimbursable meals	9.5	64.4	26.2	13.2	54.4	32.5	16.3	48.1	35.6	27.3	48.1	24.7	12.4	57.6	30.0
Persuading students to select reimbursable meals	13.0	69.8	17.2	19.3	60.0	20.7	16.7	67.2	16.1	14.1	61.5	24.4	16.1	65.4	18.5
Marketing healthier food choices	13.6	66.1	20.3	12.0	60.3	27.7	19.4	51.9	28.8	17.9	48.7	33.3	14.0	61.2	24.8

Source: School Meals Initiative Implementation Study: First Year Report, 2000

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The relationship between those NSMP/ANSMP respondents indicating that implementation of the tasks was a "major burden" and the district's status of implementation is displayed in Table VI-2. Perhaps not surprisingly, those respondents that have not started on SMI implementation generally do not see it as a major burden. Once districts have embarked on implementation, however, a significant share view most of the tasks as posing a major burden regardless of how far along they are in the implementation process. There is some indication that this attitude might peak in the later stage of implementation receding somewhat after the menu planning process is fully implemented.

Table VI-2: Extent to Which Tasks Required in Implementing Nutrient Standard Menu Planning have been a Major Burden to Participating Public NSLP School Districts, by Status of Implementation, SY 1997/98

Task	Status of implementation				
	Fully implemented	At least 75% implemented	At least 50% implemented	At least 25% implemented	Not started
	percent of districts				
Developing standardized recipes	20.4	37.9	20.9	19.5	1.3
Entering/analyzing recipes	26.8	30.2	22.7	17.1	3.2
Planning menus	29.2	29.5	19.8	20.4	1.1
Obtaining information for weighted analysis	27.6	33.0	19.8	17.0	2.7
Entering/analyzing menus	26.8	29.9	22.2	17.5	3.6
Obtaining missing nutrient information	26.8	30.6	22.3	16.9	3.3
Providing specifications for purchased foods	21.9	28.3	26.3	21.9	1.7
Monitoring to ensure that specifications are met	24.9	30.2	19.2	23.8	2.0
Training foodservice staff	25.3	30.7	19.0	23.0	2.0
Entering product information	23.6	29.5	23.6	19.4	3.9
Selecting appropriate items from database	23.6	34.5	16.7	22.5	2.7
Retraining staff to identify reimbursable meals	26.0	30.1	22.6	18.1	3.2
Persuading students to select reimbursable meals	33.2	29.2	20.3	14.8	2.5
Marketing healthier food choices	23.7	34.4	25.5	14.2	2.2

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Staff Time in Planning Menus

As indicated earlier, there are a number of tasks associated with the start-up of NSMP that are relatively labor intensive. This includes data entry, staff training, and recipe modification and standardization, among other tasks. On the basis of detailed logs maintained by 13 school districts taking part in the NSMP demonstration, it was estimated that the median time required for start-up was 1,139 hours.

Most of these tasks are required only at start-up and are not part of the routine menu planning process that follows implementation. The labor associated with menu planning and analysis (as distinct from implementation of NSMP) accounted for less than 10% of start-up labor for the demonstration districts. Menu planning was also one of the tasks that was least frequently reported as posing a significant burden by directors taking part in the demonstration.

Foodservice directors implementing NSMP in their schools were asked in this study if their staffs were spending more time, the same amount of time, or less time planning menus, relative to the time spent prior to implementing NSMP. They were asked this for both lunch and breakfast menus. A strong majority reported that they spent "more time" planning both lunch and breakfast menus – 75.8% on lunch menus and 65.5% on breakfast menus. Larger districts are somewhat less likely to report that more time is required, though even among the largest districts, a majority said that they spent more time in menu planning following implementation of NSMP.

A word of caution is appropriate in interpreting these results. While some respondents might have distinguished between labor requirements for start-up as opposed to labor required for on-going menu planning, it is likely that others did not make this distinction. As a result, it is not surprising that most directors reported spending more time. Results from the Year Two survey will provide a more meaningful basis for comparing the time requirements of menu planning, pre-NSMP and post-NSMP.

Table VI-3: Change in Time Spent Planning Menus Since Implementation of Nutrient Standard Menu Planning, SY 1997/98

District characteristics	Breakfast			Lunch		
	More time	Same	Less time	More time	Same	Less time
	(percent)					
All districts	65.5	27.3	7.3	75.8	18.0	6.1
District size[1/]						
Less than 1,000	68.2	21.4	10.4	77.6	13.7	8.7
1,000 – 4,999	64.2	30.7	5.1	77.5	19.4	3.1
5,000 – 24,999	63.7	31.5	4.8	69.1	24.6	6.3
25,000 or more	56.6	34.2	9.2	64.1	26.9	9.0
Program participation						
NSLP and SBP	65.5	27.3	7.3	74.2	19.4	6.4
NSLP only	--	--	--	81.5	13.5	5.0
District poverty level[2/]						
High (>60% f&r)	65.5	25.9	8.6	73.0	19.1	7.9
Medium (31-60% f&r)	65.8	27.1	7.1	73.2	19.8	7.0
Low (≤30% f&r)	64.9	28.3	6.8	79.8	15.7	4.5

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Menu Changes

For schools adopting NSMP, it is to be expected that some menu changes will be required. The principal uncertainty is the degree of change required. Extensive changes, if required, would not only place a significant burden on school food personnel but could also have a negative impact on student participation if the changes were not well received. The absence of change, on the other hand, might be interpreted as an indication that too little had been done to upgrade the nutritional content of the menus.

Survey results indicate that the majority of NSMP districts characterize their menus as "somewhat different" than before implementation of the SMI. Around 80% of all districts described their lunch menus in this way and slightly more than 70% reported their breakfast menus were "somewhat different." A relatively small share of all NSMP districts, 4% to 7% depending on the meal and grade level, described their menus as "very different."

Slightly less than one-quarter (23%) of those NSLP districts that provided breakfasts reported that their breakfast menus were unchanged. A somewhat smaller share (13% to 14%) reported that their lunch menus were unchanged since the SMI came into effect. Since more than one-quarter of all NSMP school districts indicated in response to another question that they had not yet begun to implement NSMP, the absence of any change in the menus of some districts is to be expected.

All things considered, these results are consistent with a gradual, measured implementation of the SMI, with some districts not yet fully engaged in the process.

Table VI-4: Menu Changes Made by Public NSLP School Districts Following Implementation of Nutrient Standard Menu Planning, SY 1997/98

Menu/school type	Degree of difference in menus			Total
	Very different	Somewhat different	No difference	
	(percent)			
Breakfast				
Elementary	3.8	73.0	23.1	100.0
Middle/secondary	3.9	73.2	22.8	100.0
Lunch				
Elementary	4.1	81.6	14.4	100.0
Middle/secondary	6.7	80.0	13.3	100.0
Other (deli, salad bars, etc.)				
Elementary	3.8	68.6	27.7	100.0
Middle/secondary	4.7	67.1	28.2	100.0

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Change in A La Carte Sales

For those students eating food offered through school foodservice, the options are to eat a reimbursable meal or, where offered, to buy individual items a la carte. As noted elsewhere, not all schools offer a la carte, particularly elementary schools.

To the extent a la carte food sales have increased since implementation of NSMP, it is a cause for concern on two counts. First, it is possible that the increase is due to student dissatisfaction with the menu changes made necessary by the SMI. The second reason for concern is that, regardless of what prompted the change, an increase in a la carte sales

probably means that fewer students are taking advantage of the nutritionally upgraded reimbursable meals.

Survey results for those school districts that have implemented NSMP indicate that the majority of school districts experienced no change in a la carte sales, either in their elementary schools or their middle/secondary schools. As might be expected given the less prominent role of a la carte in elementary schools, the share of those districts offering a la carte that experienced no change in their elementary schools (83.7%) was somewhat higher than those experiencing no change in their middle/secondary schools (63.3%).

To the extent school districts report a change in their a la carte sales, nearly all report increased sales. And for middle/secondary schools, a significant share (35.3%) reported an increase. In fact, for middle/secondary schools in the largest districts, nearly half (49.4%) reported increased a la carte sales.

One caveat should be noted in the interpretation of these data. To the extent there is an established upward trend in a la carte sales, the changes noted here should not be attributed to the impact of the SMI, absent more detailed evidence establishing such a linkage.

Table VI-5: Change in A La Carte Sales Since Implementation of Nutrient Standard Menu Planning, SY 1997/98

District characteristics	Elementary schools				Middle/Secondary schools			
	Increased sales	No change	Decreased sales	A la carte not offered	Increased sales	No change	Decreased sales	A la carte not offered
	(percent)							
All districts	9.6	51.0	0.3	39.1	30.6	54.9	1.2	13.3
District size[1/]								
Less than 1,000	5.9	42.2	0.0	51.9	18.2	58.4	1.1	22.2
1,000 – 4,999	10.8	57.3	0.7	31.3	36.1	52.5	1.7	9.7
5,000 – 24,999	17.7	59.4	0.0	22.8	39.6	54.7	0.2	5.5
25,000 or more	9.0	56.4	0.0	34.6	49.4	49.4	1.3	0.0
Program participation								
NSLP and SBP	10.4	54.2	0.3	35.0	28.5	57.7	1.2	12.7
NSLP only	6.8	39.6	0.0	53.6	40.1	42.6	1.4	15.9
District poverty level[2/]								
High (>60% f&r)	3.7	47.5	0.0	48.9	18.0	53.0	0.0	29.0
Medium (31-60% f&r)	6.7	53.7	0.6	39.0	27.5	57.9	2.1	12.6
Low (≤30% f&r)	15.3	49.6	0.0	35.1	37.5	52.4	0.7	9.4

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Overall Impact of the School Meals Initiative

In this section, we examine the impact of the SMI on all school districts participating in the NSLP, regardless of their choice of menu planning system.

Menu Related Features of the Program

It was expected that implementation of the SMI would result in numerous changes in menu planning practices, at least among some school systems. Achievement of the nutritional goals spelled-out in the SMI provides an incentive for schools to adopt certain practices, if they are not already in effect. The use of centralized menu planning and menu cycles are examples of practices that make it easier for school districts to comply with the new menu planning requirements.

The Department was interested in knowing how the SMI affected the use of these practices as well as a wide range of other program features, including: the availability of a la carte and self-serve foods, the number of menu choices and the number of new menu items, portion sizes and variation in menu items among age/grade levels, and the number of fruits and vegetables offered, among others.

The NSMP demonstration provided some evidence in this regard. Eight of the 11 school districts taking part in the demonstration that had not followed a menu cycle prior to NSMP adopted one by the end of the demonstration.[1/] Likewise, four of the six districts that had not planned their menus centrally in advance of the demonstration switched to a centralized system by the end of the demonstration. There was no indication from the demonstration that the adoption of NSMP affected either the number of luncheon items offered or the overall level of variety in the menus. It was found in the demonstration that the NSMP menus offered a wider variety of fruits for both lunch and breakfast.

In this study, one finding above all others is evident from the survey results: many school districts are making numerous changes in the menu-related features of their programs. In general, districts are moving toward:

- increased number of fruits and/or vegetables offered (76%)
- increased number of new menu items (71%)

[1/] Ibid., p. 6-16

- increased portion sizes by age/grade level (54%)
- increased variation of menu items among age/grade levels (42%)
- increased number of menu choices for reimbursable meals (36%)
- increased availability of a la carte in middle/secondary schools (24%)
- increased use of menu cycles (22%)
- increased marketing of menus (21%)
- increased availability of offer vs. serve in elementary (17%)
- increased use of centralized menu planning (16%)

For each of the features listed here, the share of all districts moving in the opposite direction was less than 3%. Thus, it would appear that the impact of the SMI on menu planning practices has been widespread and almost entirely positive.

Table VI-6: Changes in Menu Related Features of Programs in Public NSLP School Districts Since Initiation of the School Meals Initiative, SY 1997/98

Program feature	Increase	No change	Decrease	Eliminated	Never had
	percent of all districts				
Use of menu cycles	22.1	40.3	1.2	0.7	35.7
Use of centralized menu planning	15.9	64.7	1.1	1.1	17.2
Use of decentralized menu planning	2.8	35.5	4.9	2.7	52.7
Availability of self-serve foods/food bars	20.7	48.0	3.6	2.7	25.1
Availability of *a la carte* in elementary schools	10.6	43.1	2.0	1.8	42.5
Availability of *a la carte* in middle/secondary schools	23.9	52.0	2.1	0.8	21.2
Number of menu choices for reimbursable meals	36.2	53.0	2.8	0.5	7.5
Number of new menu items	71.4	23.9	2.3	0.0	2.4
Portion sizes by age/grade level	53.6	42.0	2.2	0.3	1.9
Opportunity for local cafeteria options	12.7	61.4	3.7	0.7	21.5
Number of fruits and/or vegetables offered	76.2	22.0	0.6	0.0	1.2
Variation of menu items among age/grade categories	42.3	50.3	1.6	0.2	5.7
Marketing of menus	21.1	66.7	1.0	0.2	11.1
Availability of offer vs. serve in elementary schools	16.8	71.5	0.9	0.8	10.1
Physical layout of cafeteria	10.3	84.8	0.6	0.1	4.1

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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This progress notwithstanding, it is noted that more than one-third of all districts report that they have never used menu cycles and a comparable share has never used centralized menu planning. Absent these features in their menu planning, these districts could find it difficult to achieve the required nutritional objectives. The readiness of these districts to make needed changes will bear watching in the future.

Food Procurement and Preparation

Survey results indicate widespread changes in many procurement and preparation practices as a result of the SMI. Many districts have increased their purchase of low-fat/reduced-fat foods (81%) and fresh fruits and vegetables (75%). The vast majority of districts are also requiring more nutrition information from their vendors (84%) and are making increased use of product specifications (70%).

While more school districts say that they have increased their share of prepared foods than decreased it (17% versus 10%), it is noteworthy that as many as 10% of all districts believe that they have reduced their purchase of processed foods. If true, this would run counter to what is widely believed to be a strong and well-established trend. Presumably, this response is influenced by the large number of districts reporting increased purchases of fresh fruit and vegetables.

Another interesting finding is that a substantially larger share of all districts say that they have increased their use of USDA donated commodities as compared to those who say that they have decreased their use (25% vs. 3%). This is surprising in that the per lunch value of entitlement commodities distributed in recent years has generally not kept pace with the overall rate of inflation in food consumed away from home. This is true if SY 1997/98 is compared with either SY 1994/95 or SY 1995/96 (the two years preceding implementation of the SMI). In addition, the aggregate value of bonus commodities has trended lower over this period.

Perhaps the more likely explanation for this finding is that the Department's efforts in recent years to improve the quality and nutritional content of donated foods and to provide improved access to fresh fruits and vegetables through the Department of Defense procurement system are resulting in more usable donations. This dimension of the program might bear closer attention in the future.

Food preparation practices have also undergone considerable change since the SMI was launched. With the exception of the purchase of new-equipment, a large majority of districts indicate that they have increased:

- their use of standardized recipes (60%)
- their use of new USDA recipes (60%)
- the time they devote to recording food production information (68%)
- the frequency with which recipes are modified to improve the nutritional content of meals (80%)
- the frequency with which preparation methods have been modified to improve the nutritional content of meals (77%)

Table VI-7: Changes in Food Preparation and Food Procurement Practices in Public NSLP School Districts Since Initiation of the School Meals Initiative, SY 1997/98

Practice	Increase	No change	Decrease	Eliminated	Never had
	----------percent of all districts----------				
Food Procurement					
Purchase of fresh fruit and vegetables	74.7	23.1	0.7	0.0	1.5
Purchase of prepared foods	16.9	70.4	10.2	0.2	2.4
Purchase of pre-plated meals from outside vendors	1.1	14.4	1.6	2.5	80.5
Use of USDA donated commodities	25.0	68.8	2.8	1.0	2.4
Purchase of low-fat/reduced-fat foods	81.2	16.3	0.8	0.1	1.6
Requiring nutrition information from vendors	84.2	13.1	0.1	0.2	2.4
Use and content of product specification	70.4	27.5	0.1	0.0	2.1
Use of purchasing cooperatives	17.1	50.1	0.7	0.3	31.8
Food Preparation					
Use of standardized recipes	60.3	35.9	0.8	0.3	2.7
Use of new USDA recipes	60.4	35.0	1.5	0.5	2.7
Time devoted to recording food production information	68.1	28.2	2.0	0.0	1.6
Frequency with which recipes modified to improve nutritional content of meals	80.2	17.4	0.3	0.1	2.1
Frequency with which preparation methods modified to improve nutritional content of meals	77.2	20.7	0.2	0.2	1.7
Purchase of new equipment	22.2	73.1	1.1	0.5	3.0

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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As a reminder, these changing practices are occurring early in the SMI implementation process. That such a large share of districts are reporting these changes is indicative of their responding to the requirements of the new menu planning systems. As districts move up the "learning curve" with respect to these requirements, it is expected that the need for change in these practices will decline, perhaps sharply.

Program Costs

The potential impact of the SMI on program costs has been a key issue from the outset. In response to its initial proposals published in June 1994 and January 1995, the USDA received more than 5,500 responses registering concern that the changes would result in increased costs.[1/] In the cost/benefit assessment that accompanied the Department's June 10, 1994 proposal, results of a study conducted by the Economic Research Service were cited as evidence that the new nutrient targets could be met without an increase in cost.[2/] The Department also concluded that there would be no need for significant changes in meal preparation practices that would result in higher costs. While it was noted that some school districts might incur additional costs for the purchase of computers and software, this equipment could be used over several years and therefore the costs would be spread over time. Also, the Department cited a study of school food authorities in the mid-Atlantic region that found that 60% of the districts already employed computers in some capacity and that over 25 percent of these districts were capable of doing nutrient analysis with their existing equipment.[3/]

Results of the Evaluation of the Nutrient Standard Menu Planning Demonstration indicated no significant change in meal production costs as a result of adopting NSMP.[4/] Although this evaluation was thorough in the methodology it applied to estimating meal costs, it was based on a relatively small sample. The evaluation found that start-up costs for school districts using NSMP varied considerably, depending on whether the district already had an operating computer system. For those districts that lacked such a system, the median cost of hardware, software, and other related expenses was estimated to be $3,900. When examined across all 20 school districts included in the evaluation (including those that already had computer systems), the median expenditure was only $513.

[1/] Federal Register, June 13, 1995, p. 31205
[2/] Federal Register, June 10, 1994, p. 30242
[3/] Federal Register, June 10, 1994, p. 30250
[4/] Mary Kay Fox, et. al. *Evaluation of the Nutrient Standard Menu Planning Demonstration: Final Report*, FNS, USDA, August 1998.

Other costs examined in the NSMP demonstration evaluation were labor costs associated with the implementation of NSMP as well as with maintenance of the system once it was up and running. It was concluded that NSMP start-up was roughly equivalent to slightly more than one person-year of labor valued at $16,139. Once the new system was in place, however, the findings indicated that the labor required to maintain it was about the same as for the menu planning system it replaced. Thus, the additional cost was limited to the start-up period.

Results from the current survey indicate that over three-quarters (78.6%) of all districts believe that their overall program costs have increased since implementation of the SMI. Most remaining districts (19.6%) report no change in their overall costs. Of the cost categories examined, food is the category that was most frequently reported as having increased. About 80% of all districts, regardless of size, reported an increase in the cost of food. For the other cost categories – food preparation, serving, equipment, and administrative – a majority of all districts reported no change in costs. Nevertheless, a significant minority (20% to 46%) of all districts reported that they had experienced increased costs in these categories as well.

The equipment category experienced the lowest incidence of change in cost with 80% of all districts reporting "no change." Though one might suspect that many of those districts that incurred additional equipment costs did so because they bought computers and software for use in conducting nutrient analysis, this is not obvious from the comparison by menu planning systems. Of course, it is possible that food-based districts have purchased equipment for nutrient analysis despite the fact that they are still using a food-based planning system.

Some variation in the incidence of cost change is observed among districts of different size though, as noted above, the increase in food costs was nearly uniform across all sizes. Costs associated with food preparation and serving increased somewhat more frequently among medium-size districts (1,000 to 24,999). Administrative cost increases were more frequently reported by districts of 5,000 or more.

In comparing differences among the menu planning approaches, few patterns are evident. Relatively few ANSMP districts experienced increased costs for equipment or program administration since implementing the SMI, which stands to reason since few if any changes in this regard were required. A somewhat larger share (39%) of the NSMP districts reported higher administration costs, which was to be expected. If anything, one would have expected this share to have been even higher. The reported increase in overall program cost appears to be driven largely by increased food costs and these are reported to have risen for all districts, regardless of the menu planning system they are using.

Table VI-8: Changes in Program Costs of Public NSLP School Districts Since Implementation of the School Meals Initiative, by Size of District, SY 1997/98

Cost category	District size												All districts		
	Less than 1,000			1,000 – 4,999			5,000 – 24,999			25,000 or more					
	Increased cost	No change	Decreased cost	Increased cost	No change	Decreased cost	Increased cost	No change	Decreased cost	Increased cost	No change	Decreased cost	Increased cost	No change	Decreased cost
	(percent)														
Food costs	79.0	18.9	2.0	82.1	14.4	3.5	82.9	14.0	3.1	79.2	19.2	1.7	80.9	16.4	2.8
Food preparation costs	35.6	62.7	1.7	46.8	50.3	2.9	46.9	50.7	2.4	30.4	66.3	2.9	41.7	56.0	2.3
Serving costs	37.7	61.5	0.8	51.1	46.2	2.7	54.1	43.1	2.8	41.3	56.3	2.5	45.5	52.6	1.9
Equipment costs	18.1	81.4	0.4	19.4	80.3	0.3	25.9	73.6	0.4	21.7	78.3	0.0	19.8	79.8	0.4
Administrative costs	21.4	77.9	0.7	33.7	65.5	0.8	52.3	47.3	0.4	45.8	54.2	0.0	31.1	68.2	0.7
Total program costs	74.7	24.7	0.6	80.0	16.8	3.2	85.9	12.4	1.8	83.3	15.8	0.8	78.6	19.6	1.8

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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Table VI-9: Changes in Program Costs of Public NSLP School Districts Since Implementation of the School Meals Initiative, by Type of Menu Planning System, SY 1997/98

Cost category	Type of Menu Planning														
	NSMP			ANSMP			Enhanced Food-based			Traditional Food-based			Other		
	Increased cost	No change	Decreased cost	Increased cost	No change	Decreased cost	Increased cost	No change	Decreased cost	Increased cost	No change	Decreased cost	Increased cost	No change	Decreased cost
	(percent)														
Food costs	76.1	19.5	4.5	92.2	7.8	0.0	85.1	13.0	1.9	79.5	17.8	2.8	86.9	13.2	0.0
Food preparation costs	35.3	62.2	2.5	37.1	62.9	0.0	48.9	49.3	1.8	41.6	55.9	2.5	46.5	53.6	0.0
Serving costs	37.1	60.4	2.6	53.7	46.3	0.0	56.4	41.7	1.8	43.4	54.9	1.7	48.2	51.9	0.0
Equipment costs	13.5	86.1	0.4	7.2	92.7	0.0	22.1	77.4	0.5	20.4	79.2	0.4	20.0	80.1	0.0
Administrative costs	39.1	60.9	0.1	19.0	81.0	0.0	31.6	68.0	0.5	28.7	70.3	1.0	42.3	57.8	0.0
Total program costs	77.3	20.4	2.4	91.3	8.7	0.0	82.0	16.8	1.1	76.9	21.1	2.0	91.6	8.5	0.0

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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In interpreting these findings, it should be recalled that they are based on respondent perceptions, not on detailed cost data. A meaningful assessment of the impact of SMI on program costs would require a substantial on-site data collection effort that is well beyond the scope of this study. And, even to the extent that such analysis provided confirming evidence of increased costs, it would be necessary to determine that the changes were associated with SMI. Higher food costs can result from several other influences including general food price inflation, increased enrollment, and higher rates of student participation in the school food program.

Number of Food Choices

School food directors were asked whether the number of food choices offered in reimbursable meals had changed since implementation of the SMI. In responding, they were asked to distinguish among six food categories and between elementary and middle/secondary schools. The results indicate the following:

- A majority of all school districts increased the number of fruit and grain/bread choices offered in both elementary and middle/secondary schools as well as the number of vegetable choices in middle/secondary schools.
- The share of districts offering an increased number of choices was somewhat higher among middle/secondary schools than among elementary schools.
- The only food category for which there were reduced offerings of any magnitude was dessert with about 10% of all school districts reporting fewer dessert choices. However, this was offset by about twice as many districts indicating that the number of dessert choices had increased.
- No consistent relationship between changes in the number of food choices offered and district size was observed. A smaller share of the smallest districts reported an increased number of choices for most food categories with the exception of milk for which the reverse was true. That is, a larger share of the smallest districts reported an increased number of milk choices.
- Few differences are evident when changes in the number of food choices are compared across the different menu planning systems. Increased choices of fruits, vegetables, and grain products are observable among all of the menu planning systems and by comparable magnitudes of change. Perhaps the most notable difference in this comparison is the large share of enhanced food-based districts indicating increased servings of grain products. This is consistent with the serving requirements of the enhanced food-based approach.

Table VI-10: Changes in the Number of Food Choices Offered in Reimbursable Meals in Public NSLP School Districts since Implementation of the School Meals Initiative, by School Type and by Size of District, SY 1997/98

School type / food category	District size												All districts		
	Less than 1,000			1,000 – 4,999			5,000 – 24,999			25,000 or more					
	Increased	No change	Decreased	Increased	No change	Decreased	Increased	No change	Decreased	Increased	No change	Decreased	Increased	No change	Decreased
	(percent)														
Elementary Schools															
Entrees	20.4	77.6	2.0	27.7	69.7	2.6	36.7	60.2	3.1	28.3	67.5	4.2	25.8	71.8	2.4
Fruit	56.7	43.0	0.3	64.1	35.4	0.5	65.9	32.8	1.3	56.3	43.8	0.0	61.0	38.5	0.5
Vegetables	36.0	62.3	1.7	44.4	54.7	0.8	51.4	46.9	1.7	38.8	60.8	0.0	41.6	57.1	1.3
Grain/Bread	44.7	54.9	0.4	61.2	37.9	0.9	67.8	30.9	1.4	60.4	38.3	1.7	54.9	44.4	0.7
Milk	12.7	86.8	0.4	12.4	85.2	2.3	9.5	87.1	3.4	6.7	90.4	2.5	12.1	86.3	1.5
Desserts	12.4	79.7	7.9	20.7	68.0	11.3	24.7	59.9	15.4	27.5	65.4	6.7	17.8	72.0	10.3
Middle/Secondary Schools															
Entrees	26.9	70.8	2.3	42.2	54.2	3.6	43.5	52.5	3.9	38.3	60.0	1.7	36.8	60.0	3.2
Fruit	65.4	33.3	1.3	69.2	29.9	0.9	66.2	32.7	1.2	56.3	42.9	0.8	67.1	31.8	1.1
Vegetables	52.4	45.2	2.4	59.3	39.0	1.7	58.3	40.1	1.5	48.3	50.4	1.3	56.5	41.6	1.9
Grain/Bread	47.7	51.7	0.6	62.3	36.9	0.8	67.6	31.4	0.9	60.0	38.3	1.7	57.8	41.4	0.8
Milk	14.9	83.9	1.1	12.2	85.0	2.8	9.0	87.6	3.4	5.8	91.7	2.5	12.6	85.1	2.3
Desserts	14.6	78.1	7.4	24.0	64.9	11.1	24.1	61.7	14.2	29.6	65.4	5.0	20.7	69.2	10.1

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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Table VI-11: Changes in the Number of Food Choices Offered in Reimbursable Meals in Public NSLP School Districts since Implementation of the School Meals Initiative, by School Type and by Type of Menu Planning System, SY 1997/98

School type / food category	NSMP			ANSMP			Type of Menu Planning: Enhanced Food-based			Traditional Food-based			Other		
	Increased	No change	Decreased	Increased	No change	Decreased	Increased	No change	Decreased	Increased	No change	Decreased	Increased	No change	Decreased
	(percent)														
Elementary Schools															
Entrees	27.1	69.1	3.8	27.1	69.5	3.4	28.5	68.9	2.5	24.2	74.1	1.7	29.3	64.8	5.8
Fruit	53.4	45.4	1.2	62.5	37.5	--	59.8	39.3	0.9	62.7	37.0	0.3	62.3	37.7	--
Vegetables	39.5	58.9	1.6	30.4	68.7	0.9	45.3	53.8	0.9	40.8	57.8	1.4	54.1	45.9	--
Grain/Bread	47.3	50.8	2.0	55.1	44.9	--	68.6	30.7	0.7	51.7	47.9	0.3	52.5	47.5	--
Milk	12.0	85.8	2.2	12.6	86.5	0.9	12.2	86.0	1.8	12.3	86.4	1.3	8.6	91.4	--
Desserts	20.2	69.6	10.2	20.0	68.1	11.8	26.1	64.8	9.0	13.2	75.5	11.3	17.9	79.9	2.3
Middle/Secondary Schools															
Entrees	36.1	59.7	4.3	42.5	51.8	5.7	39.7	56.6	3.7	34.6	63.2	2.2	50.6	49.4	--
Fruit	64.7	34.1	1.1	70.0	30.0	--	66.4	32.3	1.3	66.9	32.0	1.2	70.1	28.9	0.9
Vegetables	52.8	46.1	1.2	67.5	31.3	1.2	57.0	42.0	1.0	55.7	41.8	2.5	62.4	36.7	0.9
Grain/Bread	49.4	49.2	1.5	67.9	32.1	--	71.3	28.2	0.5	53.9	45.5	0.6	51.0	49.0	--
Milk	11.3	85.6	3.1	18.4	80.4	1.2	13.2	84.5	2.3	12.3	85.5	2.2	3.7	96.3	--
Desserts	22.7	66.2	11.1	30.6	67.3	2.1	26.3	65.5	8.3	16.8	71.7	11.5	19.3	78.3	2.4

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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Portion Sizes

Inherent in the adoption of the Dietary Guidelines as a principal objective of the SMI is the need for increased reliance on some foods and decreased reliance on others. In particular, the Dietary Guidelines call for more fruits, vegetables, and whole grain foods and for the reduced intake of foods high in fat. For those schools that are using NSMP, the nutrient analysis itself is likely to result in menus that incorporate these changes. The enhanced food-based menu planning system establishes minimum quantities of the meal components that have the same effect. For example, in comparison with the traditional food-based system that was followed prior to the SMI, for Grades 7-12 the enhanced system establishes a meat or meat alternate serving that is one-third smaller and servings of fruits and vegetables and grains/bread that are larger by one-third and 50%, respectively.

The survey findings generally correspond with the expected changes in portion size. At least half of all districts report that they increased the portion size for fruit, vegetables, and grain/bread. Districts in the middle size categories (1,000 to 24,999) increased the portion size of these foods with slightly greater frequency than did either the smallest or the largest districts.

This pattern was largely the same among elementary schools as among middle/secondary schools.

Very few districts changed the portion size of milk, which could be expected since it is unchanged in the food-based systems. Also, container sizes for milk are geared to traditional serving sizes and are therefore unlikely to be changed. Likewise, about 80% of all districts reported no change in portion sizes for either entrees or desserts. Of those districts that did change the size of their entrée portions, a substantially larger share increased the size than went in the opposite direction. The one major exception is among elementary schools in the largest districts. Among these districts, more than twice as many reduced the size of their entrée as increased it. In the case of desserts, the shares increasing and decreasing portion size were approximately even.

The prescribed changes in the enhanced food-based menus are evident in the comparison across types of menu planning systems. A substantially higher share of districts using the enhanced food-based system reported increased portion sizes of fruit, vegetable, grain, and bread, even somewhat higher than reported by NSMP districts. ANSMP and traditional food-based districts reported the lowest incidence of change in portion size.

Table VI-12: Changes in the Portion Size of Reimbursable Meals Since Implementation of the School Meals Initiative, by School Type and by Size of Districts, SY 1997/98

School type / food category	District size												All districts		
	Less than 1,000			1,000 – 4,999			5,000 – 24,999			25,000 or more					
	Increased	No change	Decreased	Increased	No change	Decreased	Increased	No change	Decreased	Increased	No change	Decreased	Increased	No change	Decreased
	(percent)														
Elementary Schools															
Entrees	13.8	82.6	3.6	10.7	84.1	5.2	12.4	80.2	7.5	4.6	84.2	11.3	12.1	82.9	4.9
Fruit	54.2	44.9	0.8	55.9	42.9	1.2	57.2	42.4	0.5	43.3	55.8	0.8	55.1	44.0	0.9
Vegetables	48.9	50.1	1.0	50.9	48.0	1.1	54.5	44.8	0.7	38.3	60.0	1.7	50.3	48.7	1.0
Grain/Bread	53.9	45.6	0.6	64.0	35.0	1.0	67.2	32.3	0.6	57.1	41.3	1.7	59.9	39.3	0.8
Milk	2.9	97.1	0.0	0.8	98.3	0.9	1.5	98.4	0.2	0.8	97.9	0.8	1.8	97.8	0.4
Desserts	6.8	84.7	8.5	11.7	80.4	8.0	14.7	76.6	8.7	13.8	82.9	2.9	10.0	81.8	8.2
Middle/Secondary Schools															
Entrees	15.9	80.5	3.7	19.4	77.0	3.6	16.8	76.4	6.8	12.9	79.2	7.5	17.6	78.2	4.2
Fruit	57.0	41.7	1.3	60.8	39.0	0.3	57.4	42.3	0.3	46.3	52.9	0.8	58.6	40.7	0.7
Vegetables	54.2	44.0	1.8	57.0	42.1	0.9	55.6	44.0	0.4	41.7	58.3	0.0	55.5	43.4	1.1
Grain/Bread	59.1	39.9	1.0	69.2	29.4	1.4	69.4	29.8	0.8	63.8	34.6	1.3	65.5	33.4	1.2
Milk	5.0	95.0	0.0	1.8	97.6	0.6	0.9	98.9	0.2	0.0	100.0	0.0	2.8	96.9	0.3
Desserts	7.0	85.4	7.7	13.5	78.8	7.7	15.9	76.0	8.1	17.1	80.4	2.5	11.6	80.8	7.6

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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Table VI-13: Changes in the Portion Size of Reimbursable Meals since Implementation of the School Meals Initiative, by School Type and by Type of Menu Planning System, SY 1997/98

School type / food category	Type of Menu Planning														
	NSMP			ANSMP			Enhanced Food-based			Traditional Food-based			Other		
	Increased	No change	Decreased	Increased	No change	Decreased	Increased	No change	Decreased	Increased	No change	Decreased	Increased	No change	Decreased
	(percent)														
Elementary Schools															
Entrees	18.0	70.8	11.2	6.1	84.9	9.0	12.3	83.3	4.4	9.9	86.7	3.4	7.8	85.8	6.4
Fruit	54.1	44.5	1.4	33.8	64.7	1.4	68.6	31.1	0.3	49.9	49.2	0.9	51.0	46.3	2.7
Vegetables	48.4	50.2	1.4	32.3	66.2	1.4	64.9	34.8	0.3	43.9	55.1	1.0	43.3	54.0	2.7
Grain/Bread	51.7	46.8	1.5	38.3	60.3	1.4	77.3	22.2	0.5	54.5	44.8	0.7	54.7	45.3	--
Milk	1.6	96.9	1.5	--	100.0	--	1.0	98.9	0.1	2.3	97.5	0.1	--	100.0	--
Desserts	11.7	78.5	9.8	5.3	81.4	13.3	16.1	76.8	7.2	6.8	84.7	8.5	21.7	75.9	2.4
Middle/Secondary Schools															
Entrees	25.5	68.5	6.1	14.7	75.0	10.2	17.1	78.7	4.2	14.9	81.9	3.2	16.2	81.5	2.3
Fruit	58.0	41.2	0.7	44.3	55.7	--	72.0	27.3	0.7	52.6	46.9	0.6	48.3	51.7	--
Vegetables	53.9	45.4	0.7	44.2	53.9	2.0	68.2	31.5	0.3	49.1	49.4	1.5	48.3	51.7	--
Grain/Bread	57.3	40.6	2.1	50.6	47.4	2.0	80.8	18.4	0.8	61.2	37.7	1.1	59.5	40.5	--
Milk	1.5	97.8	0.7	--	100.0	--	2.5	97.3	0.2	3.3	96.5	0.2	--	100.0	--
Desserts	13.9	77.8	8.2	13.8	81.8	4.4	16.5	76.3	7.3	8.1	83.4	8.5	22.5	75.1	2.4

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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Number of A La Carte Items Offered

The nutritional analysis that is at the heart of the SMI is limited to the reimbursable meal and, by extension, to the children that eat these meals. Foods that are sold a la carte are not included in this analysis. In effect, a la carte food sales represent a void in the system. Federal benefits are linked to the "reimbursable meal." As a result, Federal regulations define the criteria these meals must satisfy as well as the schedule of benefits relative to the household income of students eating these meals. A la carte food sales take place outside these criteria and without Federal reimbursement.

In judging the effectiveness of the SMI, therefore, it is important to know how much of the overall school food program is beyond the scope of these regulations (i.e., is represented by food sold a la carte) and what changes are taking place in this component. Accordingly, survey respondents were asked to indicate whether the schools in their districts offered foods for sale a la carte and, if they did, whether there had been changes in the number of a la carte items offered since implementation of the SMI. Their responses for a la carte lunch sales by size of district are described in Table VI-14 below.

First, it will be noted that a significant share of all school districts do not offer a la carte food sales at lunch, particularly among elementary schools. With the exception of beverages (including milk), about 45% of all districts do not offer a la carte in their elementary schools. In this regard, there is a substantial difference among district size categories. This difference is most extreme among the smallest districts (less than 1,000) where it was reported that about 60% of all districts do not offer a la carte in their elementary schools. The comparable share among the largest districts (25,000 or more) was about 23%.

A la carte items are offered with substantially greater frequency in middle/secondary schools where children's attitudes and preferences toward food have become more fully developed. Across all districts, only about 18% do not offer a la carte items among their middle/secondary schools. Differences by district size are even greater for the middle/secondary schools. Among the smallest districts, about 35% do not sell most foods on an a la carte basis in their middle/secondary schools while among the largest districts, only about 5% do not offer a la carte.

Table VI-14: Changes in the Number of A La Carte Items Offered at Lunch Since Implementation of the School Meals Initiative in Public NSLP School Districts, by School Type and by Size of District, SY 1997/98

School type / Food category	District size: Less than 1,000				1,000 – 4,999				5,000 – 24,999				25,000 or more				All districts			
	Increased	No change	Decreased	Not offered	Increased	No change	Decreased	Not offered	Increased	No change	Decreased	Not offered	Increased	No change	Decreased	Not offered	Increased	No change	Decreased	Not offered
	(percent)																			
Elementary Schools																				
Entrees	6.7	32.3	1.9	59.1	10.4	53.6	1.5	34.5	10.8	54.5	0.7	34.0	7.5	67.9	1.3	23.3	8.8	44.7	1.6	44.9
Dessert	4.3	32.1	1.5	62.1	9.2	54.6	2.9	33.2	10.9	58.6	1.8	28.8	12.1	62.1	4.2	21.7	7.3	45.5	2.2	45.0
Beverages (including milk)	6.6	43.6	0.6	49.2	12.3	64.3	0.1	23.3	14.1	68.5	0.8	16.5	15.4	71.3	0.8	12.5	10.1	56.0	0.4	33.5
Side dishes	6.3	29.4	0.7	63.6	10.9	53.2	0.7	35.2	10.8	55.2	0.8	33.2	9.6	65.8	-	24.2	8.9	43.4	0.7	47.1
Snacks	6.7	28.6	0.9	63.8	14.0	50.1	2.2	33.8	16.1	53.2	1.4	29.2	17.5	58.3	1.7	22.5	11.2	41.3	1.5	46.0
Middle/Secondary Schools																				
Entrees	14.3	49.8	0.9	34.9	28.9	59.7	2.2	9.3	30.3	62.0	1.1	6.4	26.3	69.2	-	4.6	23.8	56.7	1.5	18.0
Dessert	10.5	53.2	1.9	34.4	21.7	65.5	3.3	9.6	23.4	69.7	2.3	4.7	20.0	72.1	2.9	5.4	17.9	61.8	2.6	17.7
Beverages (including milk)	12.2	55.5	1.1	31.1	28.1	64.6	0.9	6.4	30.7	64.9	0.6	3.7	30.0	64.6	1.7	3.8	22.8	61.4	0.9	14.8
Side dishes	12.3	51.7	1.3	34.7	27.6	61.8	1.2	9.5	22.1	71.2	1.2	5.5	19.2	75.8	0.8	4.2	21.1	59.8	1.2	17.8
Snacks	22.7	40.8	0.9	35.6	35.6	51.9	2.1	10.4	33.9	58.7	1.8	5.5	31.7	62.5	0.8	4.6	30.6	49.1	1.6	18.6

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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Among those districts that offer a la carte in their schools, a majority – around 80% for elementary schools and 70% for middle/secondary schools – reported no change in the number of a la carte offerings. Of those that indicated a change, the vast majority indicated that they had increased the number of offerings. This is true of both elementary and middle/secondary schools and across all district size categories.

A substantially larger share of districts reported increased a la carte offerings among their middle/secondary schools than among elementary schools. While 16% of the districts that offered a la carte items in their elementary schools reported an increase in the number of entrees offered, 29% reported an increased number in middle/secondary schools.

Of the five food categories examined – entrees, dessert, beverages (including milk), side dishes, and snacks – the share of all districts that offered a la carte reporting an increased number of offerings was greatest for snacks. Among districts with elementary schools, 21% reported additional snack items while 38% of districts with middle/secondary schools reported the same.

Plate Waste

Ultimately, the success of the SMI will be determined by its impact on the nutritional well being of students attending the nation's primary and secondary schools. If participation in the program falls or if students continue to participate but do not eat the food that is put on their plates, the SMI's objectives will not be satisfied. Plate waste (the amount of food left on the plate uneaten) is used as an indicator of the acceptability of the food that is offered.

As in measuring program cost (described above), accurate measures of plate waste require highly detailed records, much more detailed than was possible in this study. A "second-best" indicator of plate waste, therefore, is the subjective judgement of school food directors concerning their perceptions of changes in plate waste following adoption of the SMI. Though the collection of this information from kitchen managers would have provided a more first-hand appraisal, that too was beyond the scope of this study. Despite its obvious subjectivity, plate waste is an issue of continuing concern to school food programs and therefore is monitored in some degree by most schools.

The NSMP demonstration evaluation asked kitchen managers in 137 schools in the districts they were studying for their perceptions of changes in plate waste following implementation

of NSMP.[1/] The vast majority of these kitchen managers reported that NSMP had no impact on plate waste. For those managers that reported a change, it was more frequently in the direction of less waste following the adoption of NSMP. The single exception was the cooked vegetables category for which about twice as many managers indicated more waste as compared to less. Still, 72% of all managers reported no change in plate waste for the category.

The results of this study are generally consistent with those of the NSMP demonstration evaluation. A majority of all districts reported no change in food waste following implementation of the SMI for all seven of the food groups examined. The share of all districts reporting no change ranged between 53% and 79%, depending on the food group. This is somewhat below the 71% to 93% range measured in the demonstration. The difference indicates that a larger share of the participants in this study perceived a change in the amount of waste, whether up or down.

With the exception of cooked vegetables, more respondents felt that there was less waste following adoption of the SMI than that there was more waste. This too is consistent with the findings of the NSMP demonstration evaluation, including the exception for cooked vegetables. For three food groups – milk, fruit, and desserts – at least twice as many districts reported that there was less waste as reported that there was more waste.

There is substantial uniformity of perceived changes in food waste across district size categories with no discernable differences among any of the food groups. A comparison by menu planning approach indicates that a larger share of NSMP districts believe that they are wasting less of most foods than is observed among districts using other approaches to menu planning. At least one out of five NSMP districts report wasting less for 5 of the 7 food groups. The only other planning system to approach this level of reduction is the enhanced food-based category.

On the basis of these findings, therefore, it is evident that the administrators of school food programs believe, on balance, that the SMI has had a neutral-to-positive influence on food waste in the schools and that the greatest improvement seems to have occurred among districts using NSMP.

[1/] Ibid., p. 6-4.

Table VI-15: Perceived Changes in Food Waste Following Implementation of the SMI Guidelines in Public NSLP School District, by Size of District, SY 1997/98

Food group	District size																All districts			
	Less than 1,000				1,000 – 4,999				5,000 – 24,999				25,000 or more							
	Waste more	Waste less	No change	Don't know	Waste more	Waste less	No change	Don't know	Waste more	Waste less	No change	Don't know	Waste more	Waste less	No change	Don't know	Waste more	Waste less	No change	Don't know
	(percent)																			
Milk	7.1	10.2	79.0	3.7	3.5	11.8	78.0	6.7	4.5	11.3	79.1	5.1	2.1	12.5	79.2	6.3	5.1	11.1	78.6	5.2
Main dish/entrée	12.0	17.4	67.6	3.0	10.3	17.3	64.7	7.7	11.0	17.4	66.3	5.2	9.6	17.5	67.1	5.8	11.2	17.3	66.2	5.3
Bread or bread alternate	13.4	20.8	63.3	2.5	16.0	20.3	56.2	7.5	21.2	18.4	55.7	4.7	12.9	15.0	66.3	5.8	15.5	20.2	59.4	4.9
Salad/raw vegetables	16.8	24.7	55.6	2.9	16.3	25.8	50.9	7.0	18.7	25.8	50.2	5.3	16.3	22.5	53.8	7.1	16.9	25.3	52.9	5.0
Cooked vegetables (other than french fries)	28.2	10.5	58.3	3.0	25.9	12.8	54.4	6.9	24.3	13.2	57.5	4.9	20.4	13.3	60.0	6.3	26.6	11.9	56.6	5.0
Fruit	12.0	24.6	61.0	2.5	11.1	25.0	57.2	6.7	12.1	23.7	60.2	4.0	6.3	22.5	65.4	5.8	11.5	24.6	59.4	4.5
Desserts	4.8	21.3	70.4	3.4	3.0	19.3	69.8	7.9	2.4	16.0	72.6	9.0	0.8	12.1	80.8	5.8	3.7	19.6	70.6	6.1

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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Table VI-16: Perceived Changes in Food Waste Following Implementation of the SMI Guidelines in Public NSLP School District, by Type of Menu Planning System, SY 1997/98

Food group	Type of Menu Planning System																	
	NSMP				ANSMP				Enhanced Food-based				Traditional Food-based				Other			
	Waste more	Waste less	No change	Don't know	Waste more	Waste less	No change	Don't know	Waste more	Waste less	No change	Don't know	Waste more	Waste less	No change	Don't know	Waste more	Waste less	No change	Don't know
	(percent)																	
Milk	7.2	15.1	71.8	5.9	0.0	6.4	88.8	4.7	2.9	10.0	81.6	5.4	5.5	10.4	79.5	4.7	7.9	8.9	78.0	5.3
Main dish/entrée	13.4	20.6	60.5	5.5	9.7	14.4	70.5	5.4	11.3	17.5	65.9	5.3	10.6	16.6	67.3	5.6	13.6	15.3	66.4	4.7
Bread or bread alternate	10.1	23.9	59.8	6.2	12.0	11.7	72.4	3.8	23.9	21.4	49.7	5.0	14.0	19.8	61.3	4.9	9.6	15.2	70.5	4.7
Salad/raw vegetables	17.4	29.3	47.2	6.0	17.4	19.4	61.8	1.4	17.7	29.7	49.1	3.6	16.1	22.7	55.8	5.4	11.8	30.2	52.7	5.4
Cooked vegetables (other than french fries)	28.4	18.1	48.6	4.9	24.0	6.8	67.8	1.4	28.3	11.2	56.7	3.8	25.3	11.2	58.0	5.5	17.9	11.8	65.0	5.4
Fruit	8.8	28.6	57.5	5.1	7.9	28.5	62.1	1.4	12.4	25.4	58.3	3.9	11.9	23.5	59.9	4.7	13.9	19.9	61.6	4.7
Desserts	3.2	22.0	68.2	6.6	0.0	25.3	72.3	2.3	3.1	23.2	68.0	5.7	4.1	17.7	71.8	6.3	0.0	13.9	81.4	4.7

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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Difficulty in Performing Tasks

Implementation of the SMI requires that school foodservice personnel perform a number of tasks, many of which were not required under the previous system. In general, these tasks are required to ensure that the meals are prepared and served in compliance with the planned menus. Most impact directly on operations at the level of the individual school cafeteria and kitchen. Examples include:

- following standardized recipes
- documenting substitutions and ensuring that they are nutritionally comparable
- defining meals that qualify as reimbursable
- serving portions in the planned amount
- maintaining food production records so that foods can be weighted appropriately
- separating a la carte and reimbursable sales
- obtaining production information on food selected from self-serve bars
- implementing offer versus serve
- maintaining student movement through the serving line

Survey respondents were asked to indicate whether the performance of these tasks had proven difficult and, if so, to what degree. The responses indicate that these tasks tended to fall into two groups. In one group are tasks that at least 70% of all districts reported as posing no difficulty. This includes: defining a reimbursable meal, implementing offer versus serve, and maintaining separate records for a la carte and reimbursable sales.

The remaining tasks were reported to be of at least some difficulty by half or more of the districts. However, the vast majority of districts that indicated they were having difficult chose to describe it as "some difficulty" as opposed to "major difficulty." With one exception (maintaining food production records), fewer than 10% of all districts indicated that they were having major difficulty in performing any of the tasks.

Those tasks that give school food directors the most trouble are:

- maintaining food production records
- adhering to standardized recipes
- documenting last minute substitutions
- substituting nutritionally comparable foods

While these are the most troublesome tasks for districts of all sizes, a somewhat larger share of the larger districts (enrollment of 5,000 or more) reported major difficulty in accomplishing these tasks. Given that proportionally fewer of the smaller districts are using NSMP and ANSMP, it is possible that these tasks are not viewed as particularly difficult because they have not been widely confronted.

A comparison of school districts disaggregated by type of menu planning system reveals comparatively few differences. NSMP and ANSMP districts appear to have slightly more difficulty accomplishing certain tasks like documenting last minute substitutions. Defining a reimbursable meal appears to be a particular challenge for many NSMP districts with one-third of them reporting that this task is of at least some difficulty.

It should be noted, as indicated above, that many of these tasks are performed at the level of the school rather than the district. Since the respondents to this survey were school food directors, their perspective might have been influenced in some degree by their distance from day-to-day operations. It would not be surprising if the staff of larger districts were farther removed than those from small districts, thereby resulting in a slightly different perspective.

Table VI-17: Extent to Which Public NSLP School Districts have Experienced Difficulty in Performing Tasks Associated with Implementation of the School Meals Initiative, by Size of District, SY 1997/98

Tasks	District size												All districts		
	Less than 1,000			1,000 - 4,999			5,000 - 24,999			25,000 or more					
	Major difficulty	Some difficulty	No difficulty	Major difficulty	Some difficulty	No difficulty	Major difficulty	Some difficulty	No difficulty	Major difficulty	Some difficulty	No difficulty	Major difficulty	Some difficulty	No difficulty
	(percent)														
Documenting last-minute substitutions	6.7	45.3	48.0	6.6	46.1	47.3	13.6	53.2	33.1	12.9	42.5	44.2	7.7	46.7	45.6
Substituting nutritionally-comparable foods	6.3	51.4	42.4	9.0	55.0	36.0	12.8	55.1	32.1	10.8	43.8	45.4	8.4	53.3	38.4
Defining a reimb ursable meal	2.1	15.7	82.2	3.4	21.7	74.9	5.0	25.4	69.6	0.8	26.7	72.5	3.0	19.7	77.3
Implementing offer vs. serve	3.0	10.5	86.4	2.2	13.1	84.8	4.2	17.7	78.0	2.1	20.0	77.5	2.8	12.7	84.4
Serving planned portions	2.6	17.1	80.3	3.9	19.1	77.0	4.0	26.6	69.3	1.3	20.8	77.9	3.3	19.3	77.4
Moving students through the line	3.9	19.2	76.8	3.8	27.9	68.3	5.5	33.4	61.1	1.3	25.8	72.9	4.1	24.9	71.1
Adhering to standardized recipes	6.1	43.6	50.3	11.2	49.9	39.0	14.1	54.2	31.7	10.0	47.9	41.7	9.3	47.7	43.0
Maintaining food production records	11.1	32.9	56.0	11.3	38.3	50.4	13.7	36.7	49.6	4.6	36.7	58.8	11.4	35.7	52.9
Separating a la carte and reimbursable sales	1.9	9.8	88.3	5.1	15.7	79.3	6.8	19.3	73.9	3.3	14.6	81.7	3.9	13.6	82.5
Obtaining production information for self serve bars	4.7	21.5	73.8	11.0	27.7	61.3	14.4	30.7	54.8	9.2	31.7	58.8	8.7	25.5	65.8

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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Table VI-18: Extent to Which Public NSLP School Districts have Experienced Difficulty in Performing Tasks Associated with Implementation of the School Meals Initiative, by Type of Menu Planning System, SY 1997/98

Tasks	Menu Planning System														
	NSMP			ANSMP			Enhanced Food-Based			Traditional Food-based			Other		
	Major difficulty	Some difficulty	No difficulty	Major difficulty	Some difficulty	No difficulty	Major difficulty	Some difficulty	No difficulty	Major difficulty	Some difficulty	No difficulty	Major difficulty	Some difficulty	No difficulty
	(percent)														
Documenting last-minute substitutions	10.1	53.0	36.9	16.4	43.7	39.9	6.8	46.8	46.4	6.8	44.7	48.5	2.4	67.0	30.7
Substituting nutritionally-comparable foods	9.5	53.8	36.7	13.6	52.3	34.0	9.2	53.9	36.9	7.5	52.0	40.5	3.3	79.2	17.6
Defining a reimbursable meal	6.9	25.7	67.4	5.2	12.5	82.3	2.0	19.0	79.0	2.0	18.8	79.2	4.5	16.3	79.3
Implementing offer vs. serve	5.5	18.3	76.2	3.7	10.2	86.0	2.5	11.8	85.7	2.3	11.4	86.4	0.0	10.1	90.0
Serving planned portions	3.3	22.4	74.3	8.9	13.7	77.3	3.1	18.5	78.4	3.2	18.5	78.3	0.0	22.0	78.1
Moving students through the line	4.3	28.5	67.2	5.8	15.9	78.2	3.4	27.8	68.8	3.8	21.7	74.4	0.0	32.4	67.7
Adhering to standardized recipes	10.4	47.6	42.1	11.1	48.3	40.5	8.4	48.5	43.0	9.4	46.5	44.0	6.5	54.3	39.4
Maintaining food production records	11.5	35.7	52.8	8.8	24.5	66.7	13.6	36.6	49.7	10.0	34.5	55.6	4.7	48.1	47.3
Separating *a la carte* and reimbursable sales	3.9	14.4	81.7	0.0	15.5	84.4	5.2	12.0	82.8	3.5	13.5	83.0	4.9	3.3	91.9
Obtaining production information for self-serve bars	9.4	28.9	61.7	4.9	30.6	64.5	10.9	26.1	63.0	7.9	24.0	68.1	10.4	28.8	60.7

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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Ease of Meeting Nutritional Objectives

As indicated earlier, past research findings have found that the average NSLP meal exceeds the standard for one-third of the daily RDA for the relevant age groups, with a few exceptions. The exceptions are: low in zinc for most age groups; low in iron for 11- to 18-year old females; and for 15- to 18-year old males, low in food energy, vitamin B6, and magnesium. The major nutritional shortcomings revealed by these studies, however, were in the excessive levels of fat, saturated fat, and sodium.

Results of the evaluation of the NSMP demonstration concluded that the use of NSMP had little impact on the ability of schools to achieve the RDA nutrient standards or the caloric target. Of these, the hardest to satisfy (both before and after NSMP) was the caloric goal in secondary school lunches. As anticipated, the more difficult standards to meet were the percentage of calories from total fat, saturated fat, carbohydrate, and protein. While the adoption of NSMP was associated with a significant improvement in the performance of the demonstration school systems in meeting these standards, on average, they still fell short.

Those school food directors taking part in the current study who were implementing NSMP or ANSMP at the time of the survey were asked if they were having difficulty meeting the following nutrient standards:

- total calories
- protein
- calcium
- iron
- vitamin A
- percent of calories from fat
- percent of calories from saturated fat

For each nutrient standard they were having difficulty with, they were asked to indicate the age group for which they were having trouble. The same set of questions was asked for both lunch and breakfast menus.

The share of NSMP districts reporting difficulty meeting these standards in their lunch programs is shown in Table VI-19 below. About 40 to 50% of all NSMP districts report some

level of difficulty meeting three nutrient standards: total calories, percent of calories from fat, and percent of calories from saturated fat. Of these hard-to-attain standards, total calories leads the list. Approximately one-sixth of all NSMP districts reported difficulty meeting the iron and vitamin A standards. The share reporting difficulty in meeting the calcium and protein standards were the smallest at 9.3% and 6.8%, respectively.

There are differences among districts in the share that have trouble meeting these standards, though it is difficult to identify a pattern. The largest districts report having trouble with greatest frequency, compared to the other size categories, in satisfying four of the seven standards – total calories, percent of calories from fat, calcium, and iron.

Table VI-19: Problems of Public NSLP School Districts Implementing Nutrient Standard Menu Planning in their Lunch Program in Meeting Nutritional Objectives, SY 1997/98

District characteristics	Number	As % of all districts	Share of districts having difficulty meeting:						
			Total calories	Protein	Calcium	Iron	Vitamin A	% calories from total fat	% calories from saturated fat
	(number)		(percent)						
All districts	2,807	20.8	49.8	6.8	9.3	17.6	16.7	43.8	45.4
District size[1/]									
Less than 1,000	1,200	20.6	45.6	9.9	10.4	19.4	18.5	41.3	41.0
1,000 – 4,999	1,064	18.9	51.4	5.0	7.3	14.4	14.5	43.2	47.4
5,000 – 24,999	466	25.6	54.9	2.7	10.0	19.6	18.0	49.9	51.6
25,000 or more	77	32.1	64.9	5.2	14.3	22.1	11.7	59.7	51.9
Program participation									
NSLP and SBP	2,183	21.6	47.8	5.8	8.3	18.0	14.3	42.4	44.1
NSLP only	624	18.4	56.6	10.1	12.7	16.1	25.0	48.8	49.9
District poverty level[2/]									
High (>60% f&r)	435	20.7	49.5	3.3	6.7	22.0	14.5	46.8	39.5
Medium (31-60% f&r)	1,238	23.6	48.6	7.6	9.7	18.9	20.1	43.0	44.0
Low (≤30% f&r)	1,134	18.4	51.0	7.2	10.1	14.4	14.1	43.5	49.1

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

An estimated 1,829 school districts, 18.1% of all districts serving breakfast, were implementing NSMP in their breakfast programs in SY 1997/98. They reported somewhat less difficulty in meeting the nutritional objectives for breakfasts, particularly those relating to the percent of calories from total fat and from saturated fat.

As with lunches, the nutritional objective for breakfast that proved most difficult was the total number of calories. Just over half of all respondents reported difficulty meeting this objective with their breakfast menus. Furthermore, the share of districts reporting difficulty in meeting this objective is positively associated with district size. While 41.1% of all NSMP districts of less than 1,000 enrollment had difficulty with this objective, 71.4% of all NSMP districts of 25,000 or more reported having trouble.

The share of all NSMP districts that reported difficulty in meeting their objectives regarding the fat content of their breakfast menus was only about half the share that reported problems with their luncheon menus. Nearly one-quarter of the NSMP districts said that keeping total fat to no more than 30% of total calories in their breakfast menus was difficult to achieve. This compares to about 45% of all NSMP districts that had trouble meeting these goals for their luncheon menus.

Table VI-20: Problems of Public NSLP School Districts Implementing Nutrient Standard Menu Planning in their Breakfast Program in Meeting Nutritional Objectives, SY 1997/98

District characteristics	Number	Percent of all districts serving breakfast	Share of districts having difficulty meeting:						
			Total calories	Protein	Calcium	Iron	Vitamin A	% calories from total fat	% calories from saturated fat
	(number)		(percent)						
All districts	1,829	18.1	51.2	6.5	3.8	20.5	13.0	24.7	24.6
District size[1/]									
Less than 1,000	706	17.4	41.1	7.6	3.7	24.4	12.5	24.6	25.1
1,000 – 4,999	694	16.1	53.7	3.9	4.0	17.3	12.8	23.5	21.8
5,000 – 24,999	358	20.2	62.3	8.7	3.9	19.6	14.5	27.4	29.9
25,000 or more	70	19.4	71.4	10.0	4.3	18.6	10.0	22.9	22.9
District poverty level[2/]									
High (>60% f&r)	335	16.3	50.1	5.1	6.0	21.5	11.3	28.7	27.8
Medium (31-60% f&r)	922	20.3	50.5	5.1	3.8	22.8	13.0	23.2	23.9
Low (≤30% f&r)	572	15.1	52.8	9.6	2.6	16.3	13.8	24.7	24.1

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

The National Research Council (NRC) has established quantitative standards for three other dietary components. They are:

- carbohydrates – to account for more than 55 percent of total food energy
- sodium – 800 mg or less per lunch; 600 mg or less per breakfast
- cholesterol – 100 mg or less per lunch; 75 mg or less per breakfast

A quantitative standard for dietary fiber has not been established, though increased levels are considered desirable. While standards for these dietary components have not been incorporated within NSMP, participating school districts are encouraged to establish targets for them as well.

Of all school districts using NSMP, only about 500 districts (16.3% of the total) have established targets for these dimensions of their luncheon menus and just over 300 districts (16.6%) have done so for their breakfast programs. Thus, a relatively small share of all NSMP school districts have chosen to broaden the scope of their nutritional objectives in this way. The majority of those districts that have established targets for these dietary components report no difficulty in meeting them. Of those districts that do have trouble, the target that is most difficult to reach is the one for sodium. This is particularly true for luncheon menus where 40.0% of all districts reported difficulty in meeting their targets.

As with the principal nutritional objectives described earlier, these supplementary targets were generally easier to achieve for breakfasts than for lunches. The one exception was dietary fiber, which, on average, presented more trouble for breakfast menus. While there are numerous differences when districts are disaggregated by district size, the small number of observations for the largest size class in particular undermines the statistical reliability of the comparison.

Table VI-21: Public NSLP School Districts Implementing Nutrient Standard Menu Planning in their Lunch Program that have Established Other Nutritional Targets, SY 1997/98

District characteristics	Number	Percent of all NSMP districts serving lunch	Share of districts having difficulty meeting:			
			% of calories carbohydrate	Cholesterol	Sodium	Dietary fiber
	(number)	(percent)				
All districts	500	16.3	13.6	16.4	40.0	15.8
District size[1/]						
Less than 1,000	248	18.7	15.7	15.7	39.1	13.7
1,000 – 4,999	159	13.4	14.5	19.5	42.8	19.5
5,000 – 24,999	85	17.7	7.1	14.1	38.8	14.1
25,000 or more	7	9.1	0.0	0.0	42.9	28.6
Program participation						
NSLP and SBP	377	15.9	13.0	14.3	36.3	11.9
NSLP only	123	17.8	16.3	22.8	51.2	27.6
District poverty level[2/]						
High (>60% f&r)	71	14.5	5.6	15.5	38.0	9.9
Medium (31-60% f&r)	217	16.4	16.6	14.3	43.3	12.9
Low (≤30% f&r)	212	16.9	12.7	18.9	37.7	20.8

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Table VI-22: Public NSLP School Districts Implementing Nutrient Standard Menu Planning in their Breakfast Program that have Established Other Nutritional Targets, SY 1997/98

District characteristics	Number	Percent of all NSMP districts serving breakfast	Share of districts having difficulty meeting:			
			% of calories carbohydrate	Cholesterol	Sodium	Dietary fiber
	(number)	(percent)				
All districts	303	16.6	12.9	10.6	22.4	24.1
District size[1/]						
Less than 1,000	122	17.3	13.9	18.0	28.7	20.5
1,000 – 4,999	108	15.6	10.2	6.5	15.7	24.1
5,000 – 24,999	65	18.2	13.8	6.2	20.0	27.7
25,000 or more	8	11.4	25.0	0.0	25.0	50.0
District poverty level[2/]						
High (>60% f&r)	59	17.6	8.5	3.4	25.4	13.6
Medium (31-60% f&r)	146	15.8	11.0	11.0	20.5	21.2
Low (≤30% f&r)	98	17.1	19.4	14.3	23.5	33.7

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Program Acceptance

Ultimately, the success of the SMI will depend on its acceptance by those who have a major stake in its performance. This includes those who direct school food programs at the district level, the cafeteria staff who prepare and serve the meals, the business offices and district administrators, the teachers, and, most of all, the students. Furthermore, acceptance must be relatively high among each of these major stakeholder groups, not just among some groups to the exclusion of others.

As an indication of the program's acceptance during its first two years of operation, foodservice directors were asked whether the impact of the SMI on five overall performance measures had been positive, negative, or neutral. The performance measures are:

- program participation
- student acceptance
- parental support
- adult staff acceptance
- overall acceptability of menu choices

The responses indicate that in the opinion of foodservice directors, reaction to the program has been neutral-to-positive. Averaging across all five measures, 63% of all districts felt that the SMI was neutral in its impact while 30% thought the program's effect had been positive and 7% thought it had been negative. A somewhat larger share of the largest districts reported a positive appraisal of the program while proportionately more of those districts in the 5,000-24,999 size class had a negative reaction.

Of the five performance measures, the overall acceptability of menu choices was the most warmly received with 35% of all districts indicating a positive effect. And among the largest districts, 41% indicate that the SMI influence on menu choice had been positive.

The most negative response (15%) occurred in the 5,000-24,999 size districts for student acceptance and adult staff acceptance. Given the importance of student acceptance in particular, this appraisal is worrisome.

Table VI-23: Changes in Program Acceptance in Public NSLP School Districts Since Implementation of the School Meals Initiative, by Size of District, SY 1997/98

Performance measure	District size												All districts		
	Less than 1,000			1,000 – 4,999			5,000 – 24,999			25,000 or more					
	Positive effect	No change	Negative effect	Positive effect	No change	Negative effect	Positive effect	No change	Negative effect	Positive effect	No change	Negative effect	Positive effect	No change	Negative effect
	(percent)														
Program participation	28.9	65.3	5.8	31.3	60.8	8.0	26.5	64.6	8.9	31.7	62.9	5.4	29.6	63.3	7.1
Student acceptance	30.5	60.6	9.0	32.2	55.4	12.4	26.2	59.3	14.5	36.3	56.3	7.5	30.7	58.2	11.1
Parental support	19.5	77.5	2.9	25.3	72.0	2.7	29.0	67.9	3.1	33.3	66.7	0.0	23.5	73.7	2.8
Adult staff acceptance	28.3	64.1	7.6	31.0	61.4	7.6	28.1	57.3	14.7	29.2	63.8	7.1	29.4	62.0	8.5
Acceptability of menu choices	33.5	62.4	4.1	37.3	54.3	8.5	30.8	59.0	10.1	41.3	52.9	5.8	34.8	58.4	6.8

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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Table VI-24: Changes in Program Acceptance in Public NSLP School Districts Since Implementation of the School Meals Initiative, by Type of Menu Planning System, SY 1997/98

Performance measure	Type of Menu Planning System														
	NSMP			ANSMP			Enhanced Food-based			Traditional Food-based			Other		
	Positive effect	No change	Negative effect	Positive effect	No change	Negative effect	Positive effect	No charge	Negative effect	Positive effect	No change	Negative effect	Positive effect	No change	Negative effect
	(percent)														
Program participation	31.6	59.1	9.4	23.7	63.0	13.3	34.7	58.3	7.0	27.2	66.1	6.6	34.3	63.4	2.4
Student acceptance	31.6	56.7	11.7	33.2	49.6	17.2	35.6	51.9	12.5	28.2	61.1	10.7	33.4	59.4	7.3
Parental support	29.4	67.2	3.4	18.4	78.2	3.3	27.2	70.4	2.4	19.7	77.6	2.6	39.7	60.4	0.0
Adult staff acceptance	36.9	53.0	10.1	21.2	64.5	14.2	33.5	58.6	7.9	26.1	66.0	7.9	34.4	58.3	7.4
Acceptability of menu choices	36.6	55.7	7.7	34.0	55.2	10.8	38.4	54.4	7.2	32.7	60.6	6.7	41.3	55.4	3.3

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

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A comparison of these performance measures by menu planning system reveals comparatively few differences. Districts using each of the menu planning options report neutral-to-positive effects. Parental support and adult staff acceptance appear to have been more positively affected in the NSMP, enhanced food-based and "other" districts, possibly because changes associated with the SMI have been more evident.

While these overall findings indicate that most school food directors do not view the SMI as having an overwhelmingly positive impact, the effects are far more positive than negative. Given that the program is still in its start-up phase, this degree of program acceptance is reassuring.

In the survey for this study, school food directors were asked for their perceptions of the attitude of other major stakeholders toward the SMI, as well as for their own attitude toward the program. They were asked to rank the attitude of each on a five-point scale that went from very positive to very negative. Respondents were also given an opportunity to indicate "not applicable" if the description did not apply or if the attitude of the stakeholder was unknown.

The overall attitude of other stakeholders toward the SMI, in the view of school food directors, is decidedly positive. Looking across all seven of the stakeholder groups (excluding school food directors), half of the districts reported that stakeholders collectively had a "somewhat positive" to "very positive" attitude toward the SMI. This is followed by 32% of all directors who attributed a "neutral" attitude to their stakeholders, on average. Only 12% of all directors described the attitude of their stakeholders as "somewhat negative" or "very negative," with more than 80% of these applying the less critical term.

Among these stakeholders (again, excluding foodservice directors), the most supportive of the SMI as indicated by their positive attitudes toward the program are kitchen managers, administrative staff, and cooks. Cooks, on the other hand, were also the group that was most frequently reported having a negative attitude toward the program (though only 19% of the total). Thus, there would appear to be a wide range of attitudes among cooks toward the SMI, at least in the opinion of school food directors.

The vast majority of each stakeholder group was believed to be neutral-to-positive in their attitude toward the SMI. The share falling in this range was around 80% to 90% for each group.

On the basis of these findings, it would appear that there is substantial support for the SMI and that this support is spread rather uniformly across all the major interests that are affected by it. This is critically important in that a failure to attract the support of any one segment of the system could endanger the entire program.

To the extent these findings reveal any vulnerabilities in support for the program and its impact, it is among those stakeholders with the higher negative ratings. For three of the stakeholder groups the reported incidence of a "somewhat negative" or "very negative" attitude totaled 15% to 19%. The groups are: cooks, kitchen managers, and students.

The operational requirements of the SMI fall most heavily on cooks and kitchen managers. Thus, it is not surprising that some of the individuals in these positions are reacting negatively to the increased burdens associated with the new program. As noted earlier, these burdens are greatest during start-up and should diminish sharply as the program becomes established and a routine is established. The attitude of these participants toward the program bears monitoring in future surveys. The collection of on-site data would make it possible to confirm these findings and to more carefully identify the causes. Another possible means of addressing the concerns of these groups would be through education and technical assistance that is more highly focused on their immediate needs.

The relatively high negatives toward the SMI that are attributed to students are more problematic. Here too, movement up the "learning curve" is expected to result in a higher level of student acceptance. Other measurements of student attitude – e.g. program participation and food waste – provide a more direct indication of how the program is succeeding in satisfying the most important stakeholder of all. As already discussed, these measures indicate that students tend to have reacted positively to SMI.

School food directors were also asked to give their personal opinion of the SMI using the same five-point scale, from very positive to very negative. Since these are self-declared opinions, it is assumed that they are a reliable indicator of the program's performance two years into its operation.

The findings reveal strong support for the program. Nearly 70% of all directors describe their opinion as either "somewhat positive" or "very positive." Not many school food directors are neutral in their opinions of the program, only 12.4 percent. A comparable share registered an opinion that was either "somewhat negative" (10.9%) or "very negative" (2.0%).

Table VI-25: Attitude of Public NSLP School District Stakeholders Toward the School Meals Initiative, as Reported by School Food Director, SY 1997/98

Stakeholder	Very positive	Somewhat positive	Neutral	Somewhat negative	Very negative	Not applicable
	(percent of districts)					
Administrative staff	27.7	32.2	28.3	5.4	1.2	5.1
Financial staff	19.3	20.7	39.1	7.7	1.8	11.4
Kitchen managers	27.1	37.0	15.3	13.5	2.4	4.7
Cooks	22.3	36.9	19.2	16.1	2.7	2.8
Cashiers	17.3	23.2	37.9	7.1	1.9	12.7
Students	12.5	30.4	39.2	12.2	2.9	2.8
Parents	14.5	29.1	44.4	4.6	1.1	6.4

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Table VI-26: Attitude of Public NSLP School District Cooks and Students Toward the School Meals Initiative, as Reported by School Food Director, by Menu Planning System Used, SY 1997/98

Stakeholder	Very positive	Somewhat positive	Neutral	Somewhat negative	Very negative	Not applicable
	(percent of districts)					
Cooks						
NSMP	22.2	40.9	17.1	14.9	2.4	2.5
ANSMP	30.2	28.4	15.0	17.9	6.5	1.9
Enhanced food-based	24.3	33.6	19.5	17.8	3.0	1.9
Traditional food-based	20.4	37.5	20.8	15.5	2.6	3.2
Other	25.4	36.4	10.3	21.7	0.6	5.6
Students						
NSMP	15.0	30.8	37.0	11.7	2.9	2.5
ANSMP	9.8	41.3	29.8	9.5	9.7	0.0
Enhanced food-based	13.5	31.5	38.9	13.0	1.5	1.5
Traditional food-based	11.6	28.7	40.1	12.7	3.1	3.8
Other	15.9	23.9	59.5	0.0	0.6	0.0

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

There are no major differences among directors from districts of different sizes. At least two-thirds from each size category reported a positive opinion of the program. The largest differences in opinion were among districts arrayed by poverty level. School food directors from high poverty districts have a somewhat more favorable opinion of the new program than do those from low poverty districts. The findings indicate that directors from NSLP only

districts are slightly less positive and somewhat more neutral in their opinions of the Initiative. NSMP and ANSMP district directors are supportive of the program with nearly 80% of both indicating that they were either "very positive" or "somewhat positive" toward the program

Table VI-27: Attitude of the School Food Director of Public NSLP School Districts Toward the School Meals Initiative by Selected District Characteristics, SY 1997/98

District characteristics	Very positive	Somewhat positive	Neutral	Somewhat negative	Very negative	Not applicable
	(percent)					
All districts	28.5	40.9	12.4	10.9	2.0	5.3
District size[1/]						
Less than 1,000	29.9	39.2	13.9	9.5	1.4	6.2
1,000 – 4,999	28.0	42.5	11.7	11.1	2.2	4.6
5,000 – 24,999	25.0	41.8	9.7	15.3	3.3	4.9
25,000 or more	33.3	37.9	13.3	6.7	4.2	4.6
Program participation						
NSLP and SBP	31.0	40.6	10.6	10.7	2.1	5.1
NSLP only	21.1	41.9	17.9	11.3	1.9	6.0
District poverty level[2/]						
High (>60% f&r)	39.1	39.7	8.0	7.4	1.9	3.9
Medium (31-60% f&r)	28.9	41.1	11.4	10.3	2.6	5.9
Low (≤30% f&r)	24.6	41.1	14.8	12.6	1.7	5.3
Menu Planning method used						
NSMP	34.5	43.8	6.9	9.0	2.2	3.6
ANSMP	27.5	51.6	5.8	12.0	2.3	0.8
Enhanced food-based	28.4	38.7	15.2	10.9	1.7	5.2
Traditional food-based	26.3	41.2	13.4	11.5	2.0	5.6
Other	30.8	35.9	5.0	0.9	4.2	23.3

[1/] Total school district enrollment as of October 31, 1997.
[2/] Represented by percent of total enrollment approved for free and reduced-price meals as of October 31, 1997.
Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

CHAPTER VII: THE ROLE OF TRAINING AND TECHNICAL ASSISTANCE

Introduction

Under the banner of "Team Nutrition" and as a key component of the SMI, the USDA launched an extensive program of nutrition education, training, and technical assistance in support of State and local school food professionals. USDA's role in this regard, has included the development of training standards, the design and dissemination of training materials, and the creation of public/private partnerships to promote healthy eating among school children. In addition, the Department has granted 72 training grants valued at $14 million during the period of 1995-1999. These grants have been made to State agencies to assist them in providing training and technical assistance to the school districts in their States.

While the USDA is responsible for the development and dissemination of materials used in training and technical assistance, the training and technical assistance itself is provided by the State Child Nutrition agencies. Activities of the State agencies are described more fully in Chapter VIII. In addition, there are a number of other information resources available to school districts for use in implementing the SMI, including the National Food Service Management Institute, the Cooperative Extension Service, professional associations, colleges and universities, and private firms in the food industry.

Research Questions

This chapter is devoted to addressing the following questions:

- To what extent are school food directors familiar with the training and technical assistance materials provided by the USDA? How useful have these materials been?
- What are the principal sources of training and technical assistance for school food directors and how useful has it been?
- For which topics relating to the implementation of the SMI have school district staff received training and how useful has it been?

- To what extent is additional training on topics relating to the implementation of the SMI needed?

Training And Technical Assistance Materials

The Department has developed and distributed a number of different types of training and technical assistance materials, largely for State agency use in training school district personnel. These materials are provided in different forms, including loose-leaf binders, bound publications, packets of leaflets, and videos. Some of the printed materials can be downloaded from the Internet. Development of the materials was made somewhat more complicated by the regulatory changes that occurred since the program began in 1994. The addition of the Traditional Food Based menu planning system made necessary the development of additional materials.

Some of the materials are relatively elaborate. For example, the *Healthy Schools Meals Training Manual* is in the form of a loose-leaf notebook containing about 400 pages. This manual was designed for use during an intensive, three-day training session and treats all major aspects of menu planning and nutrient analysis. Other materials are less elaborate.

School food directors were asked about their familiarity with nine of the training and technical assistance products developed by the USDA, as listed in Table VII-1. For those materials the directors indicated they were familiar with, they were also asked to indicate how useful each had been. At least two-thirds of the directors indicated familiarity with four of the documents. Nearly nine of ten (88%) directors were familiar with the *Healthy School Meals Training Manual*, one of the first training manuals developed as the initiative was getting underway.

Some of the other materials appear to have received less exposure though even the resource that was least familiar, the Culinary Training Video, was recognized by 26% of the respondents. Familiarity with *ANSMP Resource Guide* would not be expected to be high, given that relatively few school districts are using the ANSMP approach.

Of the foodservice directors indicating that they were familiar with these materials, a large majority found them of at least "some use" while a significant minority found them "very useful". This was particularly true of the four documents with which foodservice directors reported greatest familiarity. For these documents, on average, 66% of the directors that recognized them said they were "of some use" while 30% found them "very useful". A

comparatively small share of producers familiar with the materials found them "of no use." Again, the fact that 22% of the respondents recognizing the guide on ANSMP found it "of no use" is not surprising in that it is directly applicable to the relatively small share of all directors that either have schools using the method or are considering its use.

It should be noted that respondent familiarity with these materials does not in itself indicate the extent to which the materials are being used.

Table VII-1: School Food Authority Familiarity with USDA Training and Technical Assistance Materials, SY 1997/98

Materials	Share of SFAs familiar with material	Of SFAs familiar with materials, share finding it:		
		Very useful	Of some use	Of no use
	(percent)			
Healthy School Meals Training Manual	88.3	29.5	67.1	3.4
A Menu Planner for Healthy School Meals	66.6	22.5	71.9	5.6
A Tool Kit for Healthy School Meals	81.6	25.5	68.5	6.0
ANSMP Resource Guide	33.4	12.9	65.1	22.1
USDA's Great Nutrition Adventure Action Packets	40.4	13.7	72.1	14.2
School Lunch Challenge Recipes	43.2	20.0	68.9	11.1
Serving it Safe: A Manager's Tool Kit	76.6	40.7	56.3	2.9
Choice Plus Food Purchasing Manual Reference Guide	49.8	24.2	70.0	5.8
Culinary Training Video	26.3	33.8	56.4	9.9

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Sources of Training and Technical Assistance

School food directors were also asked about their sources of training and technical assistance and how useful it had been. Although State child nutrition agencies are the principal conduits of material developed by USDA and receive Federal funding for this purpose, there are numerous other sources that schools can look to.

The most frequent source of assistance, not surprisingly, is the State child nutrition agency. Eighty percent of all school food directors reported that they had received training and/or

technical assistance from these agencies. Furthermore, the assistance provided by the States was well received with 78% reporting that it was "very useful" and 21% that it was "of some use".

Prior to the adoption of the SMI, State agencies were supported through the Nutrition Education and Training Program (NET). Under this program, participating States employed a State Coordinator with responsibility for conducting a needs assessment and for developing and implementing a State plan for nutrition education and training. At the time of this study, in SY 1997/1998, funding for the program had been reduced in anticipation of its replacement the following year by the Team Nutrition component of the SMI.[1/] Nevertheless, it remained the second most frequently cited source with 58% of all directors reporting that they had received assistance through it. Satisfaction with the value of the assistance was high with 61% of those who received help described it as "very useful." It is possible that many respondents did not distinguish between assistance provided through their State agencies and the NET program, which is understandable.

Other primary sources of training and technical assistance (including the share of directors that received help) were:

- USDA Food and Nutrition Information Center (47%)
- computer/computer software vendors (43%)
- professional or trade associations (39%)
- National Food and Service Management Institute (33%)

Satisfaction with the usefulness of the assistance they received was uniformly high with at least half of the recipients indicating that the assistance they received from most sources was "very useful."

[1/] Following annual appropriations of $10 million in FYs 1992-1996, the level was cut to $3.75 million in FYs 1997 and 1998 and eliminated in FY 1999.

Table VII-2: Sources of Training and Technical Assistance for School Food Authorities in Public NSLP School Districts, SY 1997/98

Source of training/technical assistance	Share of all SFAs that received assistance	Of SFAs that received assistance, share that found it:		
		Very useful	Of some use	Of no use
	(percent)			
State Child Nutrition Agency	79.6	78.2	21.1	0.7
USDA Food and Nutrition Information Center	47.4	52.9	46.0	1.2
Healthy School Meals Resource System (including Meal Talk) on world wide web	17.5	26.8	71.5	1.7
State Nutrition Education Training (NET) program	58.0	61.3	37.8	0.9
National Food Service Management Institute (NFSMI)	32.7	50.6	47.1	2.3
Cooperative Extension Service	20.3	45.5	52.8	1.6
Computer or computer software vendor	43.4	71.4	26.8	1.8
Colleges or universities	19.2	63.6	35.3	1.0
Professional or trade associations	38.5	64.2	34.7	1.1
Private consultants	11.4	75.4	22.5	2.1
Private firms in the food industry	22.7	55.0	44.7	0.4

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Types of Training Received

School food directors responding to the survey were asked to indicate the topics for which their staff had received training within the past two years. The topics that were listed related to various aspects of the implementation of the SMI. Those districts reporting that their staff had received training were also asked to judge its value.

At least three-quarters of the districts reported that their staff had received training in three central features of the SMI:

- menu planning options
- defining reimbursable meals
- use of standardized recipes

A majority of the districts that received training on these topics found the training "very useful" with nearly all participants indicating that it was at least "of some use."

On some topics (e.g. the development of menu cycles and documenting the use of substitute foods and leftovers), fewer than half of all districts had received training. These topics are relevant to all school food programs, regardless of the menu planning system that is being used. Ideally, all school districts will ultimately receive training on them. Against that standard, these findings provide a measure of the amount of training yet to be done.

Table VII-3: Topics Relating to Implementation of the School Meals Initiative in Which School Food Staff in Public NSLP School Districts Have Received Training within the Past Two Years, SY 1997/98

Topic	Share of SFAs that received training	Of SFAs that received training, share that found it:		
		Very useful	Of some use	Of no use
	(percent)			
Menu Planning options under School Meals Initiative	80.5	63.5	35.9	0.6
Defining reimbursable meals	79.6	69.7	29.4	0.9
Use of computer or computer software	53.6	72.2	23.9	3.9
Development of menu cycles	40.3	44.6	51.2	4.2
Use of standardized recipes	75.2	56.6	42.1	1.3
Implementing offer vs. serve	60.7	68.5	30.9	0.7
Controlling portion sizes	60.4	59.2	39.2	1.5
Documenting use of substitute foods	42.2	45.0	54.1	0.8
Documenting use of leftovers	46.0	43.3	54.9	1.8
Marketing your food program	53.1	43.6	53.8	2.6

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Additional Training Needs

Survey respondents were asked whether additional training on a list of 10 topics relating to the imple mentation of the SMI would be beneficial. Not surprisingly, a majority of all districts indicated that for most topics additional training would be beneficial. The only exception was

for training on offer versus serve which is a topic that is not new to most school food directors.

The high affirmative response to this question could be interpreted as further evidence of school food director support for the program and for the further development of staff skills. It is also noteworthy that around three-quarters of all districts indicated that their districts would benefit from additional training on the menu planning options as well as in the use of computers. This degree of interest in these topics at least suggests the possibility that many of the school districts that are now using food-based menu planning systems might at least be considering a switch to NSMP at some point in the future, which is consistent with the response to other questions discussed earlier.

Table VII-4: Share of Public NSLP School Districts Indicating that Additional Training Would be Beneficial, SY 1997/98

Topic	Share of all school districts
Menu Planning options under School Meals Initiative	76.8
Defining reimbursable meals	50.2
Use of computer or computer software	73.1
Development of menu cycles	63.3
Use of standardized recipes	67.5
Implementing offer vs. serve	39.4
Controlling portion sizes	55.4
Documenting use of substitute foods	65.4
Documenting use of leftovers	59.7
Marketing your food program	72.0

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

CHAPTER VIII:
THE ROLE OF STATE CHILD NUTRITION AGENCIES

Introduction

Overall responsibility for the administration of the USDA's Child Nutrition Programs rests with the Food and Nutrition Service (FNS) and with its seven regional offices located throughout the United States. The Department delegates responsibility for day-to-day administration of the programs to agencies within the 50 State governments, usually the State education agency. In turn, these agencies enter into agreements with local school food authorities to operate the programs in conformance with Federal regulations.

The purpose of this chapter is to report on the nature and degree of State agency (SA) involvement in implementation of the SMI and on State agency perspectives on the status of SMI implementation. More specifically, we examine:

- the use of alternative menu planning systems among the States;
- the nature and level of State agency involvement in training and technical assistance;
- State agency experience in conducting compliance reviews;
- the involvement of State agencies in ANSMP; and
- problems encountered by State agencies and SFAs in implementing the SMI.

SFA Use of Alternative Menu Planning Systems

Forty-nine of the 50 State agencies reported on the number of SFAs in their respective States using each of the menu planning systems in SY 1997/98, the second year of their required use (Table VIII-1). The States reported that the majority of their public SFAs (81.8%) were using one of the two food-based approaches. Of these, more than half (56.8%) were using the enhanced food-based system. NSMP were being used by 16.2% of the total while ANSMP were being used by just 1.9%. A few SFAs (less than one percent) were at least temporarily using two or more menu planning systems within their districts.

This distribution corresponds closely with the estimates based on information provided by participating SFAs and presented in Chapter IV. These results are also nearly identical to those of a national survey of public unified NSLP school districts conducted a year earlier, suggesting that most districts are staying with the system they initially adopted, at least for now.[1/]

Table VIII-1: Number of Public School Food Authorities Participating in the NSLP by Menu Planning System Used, SY 1997/98[1/]

Menu planning system	Number of SFAs	Percent of total
Nutrient Standard Menu Planning	2,252	16.2
Assisted Nutrient Standard Menu Planning	259	1.9
Enhanced Food-Based Menu Planning	6,458	46.5
Traditional Food-Based Menu Planning	4,906	35.3
Other	121	0.9
Total number of SFAs	13,888	100.0
Number of SFAs granted waivers for use of weighted nutrient analysis	6,612	46.9

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.
1/ Based on information provided by 49 of the 50 States. One State, representing 1.4% of total number of SFAs, is excluded because it could not provide information on menu planning.
Note: Sum of the number of SFAs by menu planning system exceeds the total number of SFAs by 0.8% because some SFAs used more than one menu planning system.

When viewed from the standpoint of the individual States, most have more than one approach to menu planning being used within the State. In only three States are all SFAs using the same system – one enhanced food-based and two traditional food-based. However, in another 11 States, at least 80% of the State's SFAs are using the same system. And, while in nine of these States the predominate system is food-based, in two States it is NSMP.

At the other extreme, there are several States in which one or more of the menu planning systems are not being used at all. Not surprisingly, ANSMP is the approach that is most frequently missing. Of the 49 SAs reporting, 28 indicated that there were no ANSMP districts in their States. As discussed below, in most if not all of these States the SAs do not provide an ANSMP system for their school districts.

1/ USDA, FNS, *School Food Purchase Study: Final Report*, October 1998, p. III-28.

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Eight States had no SFAs using NSMP. Somewhat surprisingly, seven States had no enhanced food-based SFAs and ten States had no traditional food-based SFAs.

Table VIII-2: Number of States by Share of Public School Food Authorities within State using Alternative Menu Planning Systems, SY 1997/98

Share of State's SFAs	NSMP	ANSMP	Enhanced food-based	Traditional food-based
	Number of States			
0%	8	28	7	10
1-19	24	18	8	10
20-39	9	2	10	9
40-59	3	1	10	11
60-79	3	0	7	4
80-99	2	0	6	3
100%	0	0	1	2

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.

Note: One State, representing 1.4% of all SFAs in the country, does not collect information on menu planning systems and is therefore not represented in this table.

Training and Technical Assistance

Among their several responsibilities, State CN agencies provide training and technical assistance to the SFAs within their States. The many changes associated with implementation of the SMI have resulted in an increased need for this assistance. In this section we look at the level of assistance that is being provided, the topics that are being treated, and State agency satisfaction with the support they receive from the USDA.

Level of Activity

All 50 SAs reported that they were engaged in providing training in support of the SMI to the SFAs in their States in SYs 1995/96 and 1996/97. All but five State agencies provided on-site technical assistance relating to the SMI during this period. Most SAs also provided training or technical assistance that specifically focused on nutritional analysis and on the use of computers in conducting menu planning.

The SAs were asked to indicate how many full-time equivalent (FTE) workers with degrees or formal training in nutrition or a related field, were engaged in monitoring and technical assistance in support of the school meals program for their agency. In responding, they were asked to distinguish between workers who were full-time agency staff members versus those who worked on the staff on a contractual basis or, alternatively were hired as individual consultants to perform these functions.

All 50 SAs reported having at least one staff member with training in nutrition or a related field. On average, SAs employed seven staff members with this expertise, though the range was very wide extending from as few as one to as many as 26.

Only 11 SAs contracted for this expertise while seven SAs used consultants. Of the SAs using contracted workers or consultants, the average number of FTE workers were five contracted and four consultants.

Table VIII-3: Training and Technical Assistance in Support of the School Meals Initiative Provided by State Child Nutrition Agencies During School Years 1995/96 and 1996/97

Nature of support	Number of State agencies	Percent of total
Training sessions	50	100
Nutritional assistance	47	94
Computer assistance	45	90
On-site technical assistance	45	90

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.

Table VIII-4: Number of State Child Nutrition Agency Workers Trained in Nutrition or Related Fields, SY 1997/98

Affiliation with agency	Number of State agencies represented	Number of workers per State	
		Range	Mean
Agency staff member	50	1-26	7
Contracted staff	11	1-28	5
Individual consultant	7	1-12	4

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.

Two-thirds of all SFAs held 20 or more training sessions in support of the SMI during SY 1995/96 and SY 1996/97. Six SAs held at least 100 training sessions over this two-year period. In all but five States, at least half of the State's SFAs were represented in these training sessions and in over one-third of all States, all SFAs within the State took part.

There is a relatively wide variation in both the number of training sessions held and the number of SFA staff attending when these measures are adjusted by the State's NSLP participation (Table VIII-5). This is due in part to the need for States that are less densely settled and have school districts with smaller enrollments to have more training sessions and

to train more SFA staff per standard unit NSLP participation. Eighty-six percent of all SAs held fewer than 25 training sessions per 100,000 NSLP participants devoted to the SMI during these two years and the median number of sessions per 100,000 participants was 7.7. The number of SFA staff attending these sessions per 1,000 NSLP participants ranged from less than 1.0 to 14.7 with a median of 3.1.

Table VIII-5: Training Sessions Conducted by State Child Nutrition Agencies During School Years 1995/96 and 1996/97 in Support of the School Meals Initiative

Indication	Number of State agencies	Percent of total
Number of training sessions held by State agency		
1-19	16	32
20-49	19	38
50-99	9	18
100 or more (median = 30)	6	12
Share of State's SFAs represented in training sessions		
1-19	1	2
20-49	4	8
50-79	12	24
80-99	15	30
100 (median = 94%)	18	36
Number of training sessions held per 100,000 NSLP participation		
<5.0	17	34
5.0-9.9	11	22
10.0–24.9	15	30
25.0-49.9	3	6
50.0-100.0 (median = 7.7)	4	8
Number of SFA staff attending per 1,000 NSLP participation		
<1.0	10	20
1.0-4.9	26	52
5.0-9.9	10	20
10.0-14.9 (median = 3.1)	4	8

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.

Topics Treated

The training programs conducted by the SAs treated a broad range of topics relating to the SMI and its implementation. At least three-quarters of the SAs treated all or nearly all of the

19 topics they were asked about (see Table VIII-6). Seven of the 19 topics were almost universally addressed. Those topics that were less frequently covered in the training sessions were either those pertaining to computerized nutrient analysis – e.g., updating the nutrient database, data entry for menu analysis, use of nutrient database, and projecting servings for weighted analysis – or to gaining stakeholder acceptance of the SMI. The relative lack of attention to nutrient analysis is probably related to the lower incidence of use of the NSMP and ANSMP planning systems. Whether the relationship is cause or effect is less certain.

Table VIII-6: State Child Nutrition Agency Treatment of Selected Topics in Training and Technical Assistance Programs

Topics	Percent of agencies
Defining reimbursable meals	98
Procedures used in counting reimbursable meals	88
Implementing offer vs. serve	98
Maintaining records of menu substitutions/additions/deletions/leftovers	98
Maintaining food production records	100
Portion control	98
Adherence to standardized recipes	100
Data entry for menu analysis	76
Projecting servings for weighted analysis	78
Use of approved software	86
Recipe analysis	90
Use of nutrient database	76
Updating nutrient database	60
Age/grade grouping used in menu analysis	94
Meeting nutrient standards	98
Gaining student acceptance of the SMI	84
Gaining parent acceptance of the SMI	72
Gaining administrators acceptance of the SMI	82
Obtaining manufacturer's product specifications/nutrient information	92
Other	34

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.

Assessment of Training Materials

State agency directors were asked to evaluate the adequacy of USDA training materials and technical assistance provided to them as well as the materials and assistance provided to the SFAs. They were also asked to identify anything they found lacking in the training provided by USDA.

The SAs generally gave high marks to this information, though one-fifth of the agencies rated the information provided them as "less than adequate" and one-quarter rated the information provided the SFAs as "less than adequate." At the other end of the scale, 32% of the SAs

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rated the information USDA provided as "very good" or "excellent" and 38% of the SAs applied these same labels to the information going to the SFAs.

Table VIII-7: State Agency Assessment of USDA Training Materials and Technical Assistance

Provided to:	Share of State agencies reporting:				
	Excellent	Very good	Adequate	Less than adequate	Poor
School food authorities	14	24	32	26	4
State agencies	12	20	46	20	2

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.

Thirty-nine of the 50 SAs responded to the open-end invitation to comment on needed changes in training materials and technical assistance. Their comments are summarized in Table VIII-8. Three themes were predominantly mentioned in these comments. The most frequent comment was that information and technical assistance be provided on a more timely basis. The implementation schedule for the SMI was advanced two years as a result of the legislation enacted late in 1994. Considering the complexity of the reforms required by the SMI, including for many SFAs the first-time use of computers for this purpose, the demands for training and technical assistance during this period were considerable.

A related comment contained in the responses of ten SAs was the need for updated and/or additional information on various aspects of menu planning and food preparation. Nine SAs commented on the need for training that is more firmly grounded in practical, real-life situations and that more experienced individuals be used in conducting training sessions. Implicit in these comments appeared to be a belief that SMI training had been too theoretical and/or impractical.

Table VIII-8: State Agency Comments on Needed Changes in Training Materials and Technical Assistance Provided by the USDA[1/]

Nature of the comment	Number of State agencies commenting
Information not provided on a timely basis	15
Updated information on a variety of topics is needed	10
Materials and training need to be more relevant to SFA operations; more reality based	9
Inconsistencies in information provided	3
Problems resulting from USDA by-passing State agencies and distributing materials	2
Training designed for large SFAs at the expense of small SFAs	2
Traditional food based menu planning slighted	1
Materials not being used by SFA staff	1
Training too elementary	1
Lacking in cohesive structure and comprehensive goal	1

[1/] Based on the comments of 39 State agencies

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.

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Compliance Reviews

In their capacity as administrators of the programs within their States, SAs are responsible for monitoring program performance and for extensive record-keeping activities. They are required to conduct administrative reviews of all SFAs within their States on a prescribed schedule. Prior to the adoption of the SMI, these reviews were conducted on a four-year cycle. That is, each SFA was reviewed every four years. As part of an effort to reduce the State agency's administrative burden, the length of this cycle was extended to five years. At the same time, State agencies were assigned a new responsibility. They were asked to conduct periodic evaluations of SFA compliance with the nutrition standards that became effective in SY 1996/97 under the SMI. These evaluations were to be conducted on a 5-year schedule too and could be conducted concurrently with the administrative reviews, at the discretion of the State agency. In the proposed "any reasonable approach" rule to the menu planning options, the USDA has proposed an initial review cycle of seven years.

The details of the nutrition evaluation depend on the menu planning system in use. For those SFAs using NSMP or ANSMP, the SA is directed to review the menus and production records and to assess the district's nutrient analysis for a one-week period. It can be any week of the current school year prior to the period of review. For those SFAs using food-based menu planning systems, the State agency must conduct its own nutrient analysis on the menus served during the review period to determine if the nutrition standards are being met. For those SFAs using food-based systems that conduct their own nutrient analysis, the SA may review the district's analysis in lieu of conducting its own. Within each SFA, State agencies must review at least one school for each type of menu planning technique in use. Reviews are limited to lunches unless a different menu planning system is used exclusively for breakfasts.

In those instances where it is found that the nutritional standards are not being met, SFAs are required to develop, with the help of their State agencies, an improvement plan designed to remedy the deficiency. State agencies are then to monitor the execution of these plans.

Since the survey on which this analysis is based requested information on activities occurring in SY 1996/97, the initial year that these requirements became effective, several SAs were still in a "start-up" phase. As noted from the responses to other questions, at least some States were finding it a struggle to train State and SFA personnel for the new program prior to its going into effect. The proposal to extend the initial cycle to seven years has also taken some pressure off the States. This is reflected in the fact that 14 SAs had not yet conducted any

reviews at the time of the survey in early 1998, 1½ years after the new requirements came into effect.

Of the 36 SAs that had begun conducting SMI compliance reviews, 12 had conducted reviews for at least 30% of their SFAs which means that they were at least on schedule to comply with the five-year cycle and several were well ahead of schedule. Still, most States were in the early stages of undertaking these reviews. Of the 36 SAs that had conducted reviews, 22 SAs had conducted them for fewer than 20% of their SFAs.

At the time of the survey in the spring of 1998, SAs had conducted just over 2,400 school site reviews. Allowing for the fact that slightly less than one percent of all SFAs were using more than one menu planning system in their districts, this level of completion is equivalent to about 17.1% of the total. The distribution of completed reviews by type of menu planning system is generally in conformance with the overall distribution of menu planning systems. The only significant difference was that proportionately more reviews had been completed among the enhanced food-based systems and proportionately fewer among the traditional food-based.

When the compliance review discloses that an SFA has failed to meet the prescribed nutritional standards, the State agency works with the district to develop an improvement plan and monitors the district's progress. Of the reviews conducted during the first 1½ to 2 years of the SMI, nearly half (47%) resulted in States issuing improvement plans. While this share would seem to be high, it may be indicative of the start-up problems that are being encountered by many SFAs.

Also, while corrective action is required for failure to meet fat, saturated fat, vitamin A, vitamin C, protein, iron, calcium, and calorie standards, it is left to the SA to determine if corrective action is required on other standards such as cholesterol, sodium, fiber, and food variety. So requirements for corrective action do not necessarily mean that an SFA has failed to meet one of the eight prescribed nutrient standards.

When the incidence of corrective action plans is viewed at the State level, there are indications that SAs might be applying substantially different standards in determining when improvement plans are required. This is suggested by the finding that 10 SAs reported that none of the SFAs reviewed in their States required improvement plans while in 21 States, 40% or more of all SFAs reviewed were found to be in need of such plans.

Table VIII-9: SMI Compliance Reviews Conducted by State Child Nutrition Agencies in SYs 1996/97 and 1997/98

	Number of State agencies	
Number of State agencies reporting that they had conducted SMI compliance reviews since start of SY 1996/97	36	
Share of SFAs within individual State having received an SMI compliance review:		
40% or more	8	
30-39%	4	
20-29%	2	
10-19%	11	
1-9%	11	
Number of school sites reviewed for SMI compliance using:	School sites reviewed	
	Number	Share of total
Nutrient Standard Menu Planning	394	16.2
Assisted Nutrient Standard Menu Planning	50	2.1
Enhanced Food-Based Menu Planning	1,368	56.4
Traditional Food-Based Menu Planning	594	24.5
Other Menu Planning Systems	32	1.3
Total	2,426	100.0
Public SFAs requiring improvement plans:		
Total number	1,129	
Number of SFAs requiring improvement plans as percent of total number of SFAs reviewed within the State:		
40% or more	21	
20-39%	3	
1-19%	2	
0	10	

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000

Respondents to the State survey were asked to estimate the average number of hours required to conduct an individual on-site SMI review, depending on the menu planning system in use and whether the school served lunch only or both lunch and breakfast. The total time devoted to the review, including time for preparation and travel to and from the site was to be reported.

The median number of hours per review ranged between 14 and 19 person-hours for lunch only sites and between 15 and 24 for those schools serving both lunch and breakfast. Slightly more hours were spent conducting reviews for food-based planning systems than for those using NSMP or ANSMP. About 20% more hours were devoted to reviews of SFAs serving both lunch and breakfast than for those serving lunch only. Since a separate analysis of breakfast menus is not required unless a different menu planning system is being used for breakfast, it is not clear why these school districts are requiring more time unless it is due to

the influence of those few districts that are using a different planning system for their breakfasts.

Table VIII-10: Number of Person-Hours Required to Conduct SMI School Site Reviews, SYs 1996/97 and 1997/98

Menu planning system used	Served lunch only			Served lunch and breakfast		
	Mean	Median	Range	Mean	Median	Range
	person hours					
NSMP	12	14	2-30	17	15	3-64
ANSMP	17	16	7-28	21	19	8-40
Enhanced Food-Based	22	19	4-48	27	24	6-75
Traditional Food-Based	20	17	4-48	23	20	6-58

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.

FNS staff, working with SA representatives, developed prototype forms, instructions, and guidance that were made available to the States for use in conducting SMI compliance reviews. Respondents to the SA survey were asked whether they had used these forms in conducting reviews and, if so, whether they had used them in the form they were provided or had made changes. They were also asked for any suggestions they might have for making improvements in these materials.

Of the 36 SAs that had conducted compliance reviews at the time of the survey, all but one used the prototype forms provided by FNS. Of the 35 SAs that used the forms, 29 agencies used them in the form they were provided or with what the respondents considered "minor changes." Several SAs offered suggestions; the most frequently offered suggestion was to eliminate duplication in the information that was being requested.

Table VIII-11: State Agency Use of Prototype Review Forms in Conducting SMI Compliance Reviews

Use of forms	Number of State agencies
Used as provided	15
Used with minor changes	14
Used with major changes	6
Not used*	15

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.
* Note: At the time this information was collected, 14 State agencies had not conducted compliance reviews.

Table VIII-12: State Agency Comments on Needed Changes in the Forms, Instructions, or Guidance Provided for Conducting SMI Reviews

Nature of the comment	Number of State agencies commenting
Eliminate duplication of the information requested	8
Add questions on assorted topics	4
It is premature to suggest changes	4
Question value of the review	2
Incorporate suggested means of improvement	1
Substitute "analysis" for "review" to make it seem less threatening	1

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.

Participation in ANSMP

Only 15 of the 50 SAs were preparing to provide the SFAs in their States with an ANSMP system, of which 12 were operational in SY 1997/98. Within the 12 States where ANSMP was operational, only 3.2% of all SFAs were using the system. A majority (9) of the SAs that were providing ANSMP were using outside expertise to develop the system. Only six SAs were developing it in-house.

Table VIII-13: State Child Nutrition Agency Participation in ANSMP, SY 1997/98

Item	Number of State agencies	Percent of total
Provide an ANSMP system for SFAs in State	15	30
Responsibility for development rests principally with:		
State agency staff	6	40
Outside consultant	5	33
Other	4	27
ANSMP system is currently operational	12	80
	Number of SFAs	Percent of total
Total Number of SFAs using ANSMP provided by State Agency	127	3.2 % of States offering ANSMP and 0.9% of all States

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.

Problems Encountered in Implementing SMI

Problems Encountered by State Agencies

The State agencies were asked if they had encountered problems in securing particular pieces of information required in monitoring implementation of the SMI. For the most part, agencies reported that obtaining the required information was either "not a problem" or was a "minor problem." However, some items proved to be more troublesome, three of which were described as presenting a "major problem" by more than 20 SAs. They were, beginning with the most frequently mentioned, the availability of: standardized recipes, manufacturer's product specifications and nutrition information, and SFA production records.

Table VIII-14: Potential Problems Encountered by State Agencies in Monitoring Implementation of the SMI, SY 1997/98

Potential problems	Share of State agencies reporting:			
	Not a problem	Minor problem	Major problem	Not applicable
	percent			
Incomplete/missing menus	46	36	14	4
Incomplete/missing production records including grades/portion sizes	10	44	42	4
Missing standardized recipes	6	34	56	4
Missing manufacturer's product specifications/nutrition information of processed foods	8	42	46	4
Missing estimates of a la carte sales and adult meals	22	44	26	8
Incomplete records of menu substitution/additions/deletions/leftovers	14	64	18	4
Missing printouts of nutrient analyses	52	28	6	14
Determining which menu planning system is being used	56	32	6	6
Defining reimbursable meals	52	38	6	4

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.

Problems Encountered by School Food Authorities

Based on their experience providing training and technical assistance to SFAs and in monitoring their performance in implementation of the SMI, SAs were asked for their assessment of the extent to which SFAs were having problems in accomplishing specific required tasks. Since the list of relevant tasks is dependent on the menu planning system being used, SAs were asked to make separate assessments for SFAs using nutrient standard menu planning and those using food-based menu planning systems. Each are discussed below.

Problems in Implementation Nutrient Standard Menu Planning

In reacting to a list of 19 key tasks or outcomes associated with implementation of nutrient standard menu planning, most SAs indicated that their accomplishment by SFAs in their States was either a "minor problem" or "not a problem." The three tasks that appeared to pose the greatest challenge to SFAs, in the view of SAs, were: adhering to standardized recipes, data entry for menu analysis, and obtaining nutritional information from manufacturers. Each of these tasks were identified as a "major problem" by at least 20 SAs.

Projecting servings for weighted analysis might have been viewed as a greater problem by more SAs had waivers not been so widely available. Of the 50 SAs, 14 indicated this task was "not applicable" to their States. Of the remaining SAs, 17 characterized it as a "minor problem" for SFAs while 14 saw it as a "major problem."

Accomplishment of the principal goal of the SMI of "meeting nutrient standards" was considered at most a "minor problem" by 86% of those SAs that commented on the level of difficulty. To the extent this is based on an informed view of SFA performance, this is an important indication of the opportunity for the ultimate success of the SMI. In a similar vein, it is noted that a significant majority (over 80%) of those SAs responding view the task of gaining stakeholder acceptance of the SMI as a "minor problem" at most.

Table VIII-15: Extent to Which SFAs Using Nutrient Standard Menu Planning Systems have Encountered Problems in Implementing the SMI as Reported by State Child Nutrition Agencies, SY1997/98

Task	Share of State agencies reporting:			
	Not a problem	Minor problem	Major problem	Not applicable
	percent			
Defining reimbursable meals	12	54	20	14
Counting reimbursable meals	34	36	16	14
Implementing offer vs. serve	12	46	28	14
Maintaining records of menu substitution/additions/deletions/leftovers	16	50	20	14
Maintaining food production records	22	44	20	14
Controlling portions	28	42	14	16
Adhering to standardized recipes	6	38	42	14
Data entry for menu analysis	4	42	40	14
Projecting servings for weighted analysis	10	34	28	28
Use of approved software	56	12	18	14
Recipe analysis	24	44	18	14
Use of nutrient database	32	36	18	14
Updating nutrient database	14	46	22	18
Age/grade groupings for menu analysis	24	42	20	14
Meeting nutrient standards	6	68	12	14
Gaining student acceptance of the SMI	26	44	16	14
Gaining parent acceptance of the SMI	34	40	12	14
Gaining administrators acceptance of the SMI	26	48	12	14
Obtaining manufacturer's product specifications/nutrient information	2	44	40	14

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.

Problems in Implementing Food-Based Menu Planning Systems

Most of the tasks confronting school districts using food-based menu planning systems are seen by a majority of SAs as not posing a major problem for the SFAs. Of the 13 tasks identified in the survey, eight were judged either "not a problem" or a "minor problem" by at least 40 of the 50 SAs. There were two major exceptions for which at least 20 SAs indicated that the tasks represented a "major problem." These tasks – adhering to standardized recipes and obtaining nutritional information from manufacturers – were also considered major problems by more than 40% of the States for Nutrient Standard Menu Planning systems.

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Thirty-nine of the 50 SAs view the objective of meeting nutrient standards by food-based systems as a "minor problem," at worst. However, 11 States report that the accomplishment of this objective will involve "major problems." Given the centrality of this objective to the success of the SMI, this level of concern over the difficulty of the task underscores the need for identifying ways of making the objective less problematic.

Table VIII-16: Extent to Which SFAs Using Food-Based Menu Planning Systems have Encountered Problems in Implementing the SMI as Reported by State Child Nutrition Agencies, SY1997/98

Task	Share of State agencies reporting:			
	Not a problem	Minor problem	Major problem	Not applicable
	percent			
Defining reimbursable meals	74	24	2	0
Counting reimbursable meals	86	12	2	0
Implementing offer vs. serve	60	36	4	0
Maintaining records of menu substitution/additions/deletions/leftovers	30	52	18	0
Maintaining food production records	24	50	26	0
Controlling portions	38	46	16	0
Adhering to standardized recipes	2	42	56	0
Age/grade groupings for menu analysis	22	44	28	6
Meeting nutrient standards	12	66	22	0
Gaining student acceptance of the SMI	36	46	18	0
Gaining parent acceptance of the SMI	46	44	8	2
Gaining administrators acceptance of the SMI	32	56	12	0
Obtaining manufacturer's product specifications/nutrient information	8	48	44	0

Source: *School Meals Initiative Implementation Study: First Year Report*, 2000.

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APPENDIX A

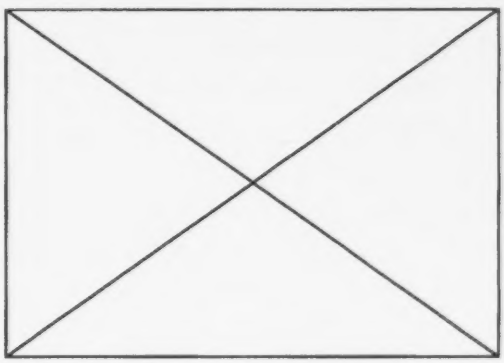
School Food Authorities Survey

OMB Clearance No. 0584-0485
Expiration Date: 10/31/2000

SCHOOL MEALS INITIATIVE IMPLEMENTATION STUDY

U. S. Department of Agriculture
Food and Consumer Service

SURVEY OF SCHOOL FOOD AUTHORITIES



Sponsored by: U.S. Department of Agriculture
Food and Consumer Service
3101 Park Center Drive
Alexandria, Virginia 22302

Contractor: The Gallup Organization
Government & Education Division
1 Church Street, Suite 900
Rockville, Maryland 20850

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General Information

This questionnaire is to be completed by the School Food Director.

Please answer each question directly on the questionnaire by checking the appropriate box or by writing your response in the space provided.

Some factual questions may request information that may not be readily available from office records (e.g., average daily attendance). Informed estimates are acceptable for such questions.

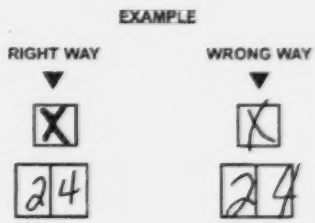
We realize that you are very busy; however, we hope that you can complete the questionnaire and return it to *The Gallup Organization* in the prepaid, self-addressed envelope provided as soon as possible. Respondents will be afforded sufficient time to complete and return the questionnaire—30 days to gather the necessary information from other members of agency staff—to the extent this is required.

Your cooperation is needed to ensure that the results of this survey are nationally representative, accurate, and timely.

Survey Instructions

Please follow the steps below carefully when completing this survey.

- Use a blue or black ink pen only.
- Do not use ink that soaks through the paper.
- Make solid marks that fit in the response boxes.
- Make no stray marks on the survey.
- To answer the survey questions, please mark the appropriate answer in each box.



Uses of the Data

The data from this survey will be used by federal and state policy makers to address issues regarding the implementation of the School Meals Initiative and related child nutrition programs.

Confidentiality

As a matter of policy, the U.S. Department of Agriculture, Food and Consumer Service, is required to protect the privacy of individuals who participate in surveys. The information provided on this form will be kept strictly confidential. Your responses will be merged with those of other respondents, and the answers you give will never be identified as yours. You may skip any questions you do not wish to answer; however, we hope you answer as many questions as you can.

Questions

If you have any questions, please call the Gallup Project Director, Dr. Sameer Abraham, or the Project Coordinator, Colleen Sullivan, toll-free at 1-888-486-6335 during normal business hours (8:30 a.m.–5:00 p.m. CST).

Thank you very much for your cooperation.

Public reporting burden for this collection of information is estimated to average 108 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, Room 404-W, Washington, D.C. 20250; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

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GLOSSARY

Assisted Nutrient Standard Menu Planning (Assisted NuMenus)

Attainment of minimum weekly nutrient levels using approved menu cycles based on nutrient analysis conducted outside of the SFA.

Elementary School

Schools classified as elementary by state and local practice and composed of any span of grades not above Grade 8. A preschool or kindergarten is included under this heading only if it is an integral part of an elementary school or a regularly established school system.

Enhanced Food-Based Menu Planning

Attainment of minimum weekly nutrient levels by offering specific food items in prescribed quantities.

Middle/Secondary Schools

Schools that have no grade lower than Grade 6 and continue through Grade 12.

National School Lunch Program (NSLP)

A Federal meal program, established under the National School Lunch Act of 1946, that provides nutritionally balanced, low-cost or free lunches to more than 25 million children each school day in more than 94,000 public and nonprofit private schools and residential child care institutions nationwide.

Nutrient Standard Menu Planning (NuMenus)

Attainment of minimum weekly nutrient levels based on nutrient analysis of all meal items conducted by the SFA.

"Other" Schools

Schools that include grade spans other than those defined by Elementary and Middle/Secondary schools. For instance, a school with a K-12 grade span would be defined as an "other" school

Provision 1

A school with at least 80 percent of students eligible for free or reduced price meals, as determined by application once every two years instead of annually. A no-fee program is an option.

Provision 2

A school which serves meals at no charge to all children as determined by application once every three years.

Provision 3

A school that serves meals at no charge to all children regardless of eligibility status.

School Breakfast Program (SBP)

A Federal meal program that provides nutritionally balanced, low-cost or free breakfasts to more than 6 million children each school day in more than 65,000 public and nonprofit private schools and residential child care institutions nationwide.

School Meals Initiative (SMI)

Launched in 1994, the first full-scale reform of the school lunch program since it was established. Its components include: updating the nutritional requirements of school meals; nutrition education training, and technical assistance; improvements in the donated commodity program; and, streamlining program administration.

Standardized Recipe

One that has been tested and adapted for use by a given food service operation and found to produce consistent results and yield every time when the exact procedures are used with the same type of equipment, and the same quantity and quality of ingredients.

Team Nutrition

The education, training, and technical assistance component of the School Meals Initiative (SMI).

Traditional Food-Based Menu Planning

Attainment of minimum weekly nutrient levels by offering specific minimum quantities of food items as prescribed by USDA in regulations issued prior to June 1995.

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SECTION 1
SCHOOL DISTRICT CHARACTERISTICS

1.1 How many schools are in your school district?
(Record total number of schools in your district.)

Number of Schools

1.2 During the 1997/98 School Year, how many schools in your district are participating in the National School Lunch Program (NSLP) and/ or the School Breakfast Program (SBP)?
(Please record separately for elementary and middle/ secondary schools as defined in the Glossary on page ii. If none, enter "0". Those schools which fall outside these definitions should be included as "Other". Briefly describe these schools in the space provided below.)

Number of Schools	Elementary ▼	Middle/ Secondary ▼	Other ▼	Total ▼
Total Number				
Number participating in **both NSLP and SBP**				
Number participating in **NSLP only**				
Number participating in **SBP only**				
Number of **SBP severe-need** schools				
Number **NOT** participating in either **NSLP or SBP**				

Briefly describe any *Other* school types (e.g., K-8, K-12, etc.) here:

1.3 Indicate total student enrollment, the number of students approved to receive free and reduced price meals as of *October 31, 1997*, and the average daily attendance, either as the number of students OR as a percent of enrollment.
(Record number of students in each school category. If none, enter "0".)

Number of Students

	Elementary ▼	Middle/ Secondary ▼	Other ▼	Total ▼
Total Student Enrollment				
Number approved to receive:				
Free meals				
Reduced price meals				
Average Daily Attendance–Number of Students				
OR				
Average Daily Attendance–Percent of Enrollment	.%	.%	.%	.%

1.3.a How many students included in "Total Student Enrollment" in Question 1.3 do *not* have access to school lunches or school breakfasts?
(For example, kindergartners who are not in session at meal time or students enrolled in a school that does not have food services so all students bring their lunches. Record number of students without access to lunches or breakfasts in each school category. If none, enter "0".)

Number of Students

	Elementary ▼	Middle/ Secondary ▼	Other ▼	Total ▼
Lunches				
Breakfasts				

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1.4 Record the number of serving days and the number of student lunches and student breakfasts served, indicating whether they were full price, reduced price, or free. If your district operates under provisions 1, 2, or 3 of the NSLP regulations (see *Glossary*, page ii), you may indicate the number of meals claimed in each category. Please provide this information for the *1996/1997 School Year* and for *October 1997*. *(If there are differences among schools within your school district for number of serving days, provide the average number of serving days for the district.)*

Student Lunches	1996/1997 School Year ▼	October 1997 ▼
Number of:		
Serving days (*average across all schools*)		
Full price lunches served/claimed		
Reduced price lunches served/claimed		
Free lunches served/claimed		

Student Breakfasts	1996/1997 School Year ▼	October 1997 ▼
Number of:		
Serving days (*average across all schools*)		
Full price breakfasts served/claimed		
Reduced price breakfasts served/claimed		
Free breakfasts served/claimed (*include severe need*)		
Severe need breakfasts served/claimed		

1.5 As of *October 31, 1997*, what prices were charged to students for reimbursable full price and for reduced price lunches and breakfasts in your school district by level of school? *(Do not include a la carte items or free meals. If full price meals were sold at more than one price within each grade level, e.g., higher prices for larger portions or discount for weekly full price meal ticket, please provide the **price of the meal** within each grade category that is purchased **most frequently**.)*

Student Lunch Prices	Elementary	Middle/ Secondary
Full price lunch	$.	$.
Reduced price lunch	$.	$.

Student Breakfast Prices	Elementary	Middle/ Secondary
Full price breakfast	$.	$.
Reduced price breakfast	$.	$.

1.6 How many of each of the following types of kitchens does your school district currently operate? *(Please enter number of kitchens. If none, enter "0". If you have kitchen types not described here, please record under "Other" and provide a brief description.)*

Type of Kitchen

Central Kitchen where meals are prepared for serving at receiving or satellite schools. No student meals are served on-site at a central kitchen.

Base Kitchen where meals are prepared for serving on-site and for shipment to other locations (*including multiple locations within the same school*).

Receiving or Satellite Kitchen which obtain partially or fully prepared meals from a base or central kitchen or an outside vendor. Other than heating, reheating, or refrigeration, no food preparations occur at a satellite kitchen.

Combination Kitchens in which some food is prepared for on-site consumption and some food is received fully or partially prepared from a central or base kitchen.

On-site Kitchen where all meals served are prepared at the facility in which the kitchen is located.

Other (*Please specify below.*)

TOTAL NUMBER OF KITCHENS

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1.7 What were the total dollar receipts of the school district's food service program from each of the sources in the *1996/1997 School Year* and during *October 1997*? *(Record dollar amounts below.)*

	1996/1997 School Year ▼	October 1997 ▼
Cash receipts from sale of reimbursable meals	$ .00	$ .00
Federal reimbursements received for reimbursable meals	$ .00	$ .00
State/local reimbursements received for reimbursable meals	$ .00	$ .00
A la carte food sales (foods that are priced and sold on an individual item basis rather than as a unit or complete meal)	$ .00	$ .00
Other receipts *(Please specify below.)* (e.g., school staff meals, Head Start or Senior Citizen Programs, Summer Food Service, etc.)		
	$	$
	$	$
	$	$
	$	$
	$	$
TOTAL RECEIPTS	$ .00	$ .00

1.8 Is your food service operation currently under the direction of a food service management company? *(Mark [x] one box.)*

- ☐ Yes
- ☐ No

1.9 For which of the following activities are computers used in your food service operation? *(The computers need not be used exclusively for SFA operations. Data entry may be performed by staff at any level and by staff from other departments. Mark [x] all uses.)*

Activities ▼

- Computers NOT USED at all in food service operations *(SKIP TO SECTION 2, PAGE 5)* ☐
- Procurement of goods or services ☐
- Meal accountability ☐
- Food production records ☐
- Inventory control ☐
- Nutrient analysis ☐
- Menu planning ☐
- Timekeeping ☐
- Personnel staffing ☐
- Internal communication (e-mail or internet) ☐
- Word processing ☐
- Recipe adjustment or modification ☐

Other *(Please specify below.)*

- ☐
- ☐
- ☐
- ☐

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SECTION 2

IMPLEMENTATION OF THE SCHOOL MEAL INITIATIVE: STATUS OF MENU PLANNING

2.1 How many of the schools in your school district are presently using each of the following methods in planning their lunch menus? *(The first three options are from the new FCS regulations issued in June 1995. The fourth option was provided by legislation approved in May 1995. NOTE: Some individual schools may be using more than one menu planning method. Include those schools in the count of each method that they are using. If none, enter "0".)*

Number of Schools

	Elementary ▼	Middle/ Secondary ▼	Other ▼	Total ▼
Nutrient Standard Menu Planning (NuMenus)				
Assisted Nutrient Standard Menu Planning (Assisted NuMenus)				
Enhanced Food-Based Menu Planning				
Traditional Food-Based Menu Planning				
Other *(Please specify below.)*				

2.2 The documentation listed below is useful for purposes of conductiond nutritional assessments. Of the types of documentation listed, which ones are routinely available in your school district? *(Mark [x] each appropriate item.)*

	Available ▼
Menus	
Complete set of menus, including all choices and any changes or substitutions made to planned menus	☐
Production records	
Forecast number of reimbursable meals (by age/grade group)	☐
Planned menu items (including milk types and noncreditable desserts)	☐
Serving sizes (by age/grade group)	☐
Number of servings planned for each menu item (by age/grade group)	☐
Total amount of menu item prepared	☐
Total amount of menu item left over	☐
Comments on substitutions	☐
Other meals	
Number of servings of each menu item used in *a la carte*, adult, and special dietary meals	☐
Standardized Recipes	
Number of servings	☐
Serving size	☐
Ingredients (including form and packing medium)	☐
Measures, weights, and/or packaging	☐
Preparation procedures	☐
Type of fats and oils used in preparation	☐
Commercially processed products	
Nutritional content of commercially processed food items	☐
Nutrient analysis print out	
Printout of nutrient analyses using USDA-approved computer software	☐

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2.3 Do you use menu cycles in your program? *(Mark [x] one box.)*

- ☐ Yes
- ☐ No *(SKIP TO QUESTION 2.4)*

2.3.a What is the length of the cycle, measured in days or weeks? *(Record days or weeks below for each category.)*

	Number of Days		Number of Weeks
Elementary schools	☐☐	OR	☐☐
Middle/Secondary schools	☐☐	OR	☐☐

2.3.b How many different cycle menus do you have during the school year? (*For example, you might have a different cycle of menus corresponding to the season of the year.*)

	Number of Cycles
Elementary schools	☐☐
Middle/Secondary schools	☐☐

2.4 Are any of the recipes that you use fully standardized? *(Mark [x] one box; see* Glossary, *page ii.)*

- ☐ Yes
- ☐ No *(SKIP TO QUESTION 2.6)*
- ☐ Not Applicable *(SKIP TO QUESTION 2.6)*

2.5 Overall, what proportion of your recipes are fully standardized? *(Mark [x] one box; see* Glossary, *page ii.)*

- ☐ All
- ☐ Most
- ☐ Some

2.6 For the menu planning method you have chosen, how far along would you say that you are toward full implementation of that menu planning method? *(Mark [x] one box.)*

- Fully implemented ☐
- At least three-quarters implemented ☐
- At least half implemented ☐
- At least one-quarter implemented ☐
- Have not started implementation ☐

2.7 Overall, how important was each of the following considerations, by school type, in making your choice of the menu planning system that you are currently using? *(Rate each consideration from 1 to 5 with "1" meaning not at all important and "5" meaning extremely important for each school type in your district. Mark [x] the appropriate box for each item.)*

Elementary Schools	Not at all Important				Extremely Important
Considerations	1	2	3	4	5
Time and labor requirements	☐	☐	☐	☐	☐
Improvement in nutritional content of school meals	☐	☐	☐	☐	☐
Acceptability of meals	☐	☐	☐	☐	☐
Availability and/or cost of equipment	☐	☐	☐	☐	☐
Staff experience	☐	☐	☐	☐	☐
Staff skills	☐	☐	☐	☐	☐
Recommendations of others	☐	☐	☐	☐	☐
Other *(Please specify below.)*					
_____	☐	☐	☐	☐	☐

Middle/Secondary Schools	Not at all Important				Extremely Important
Considerations	1	2	3	4	5
Time and labor requirements	☐	☐	☐	☐	☐
Improvement in nutritional content of school meals	☐	☐	☐	☐	☐
Acceptability of meals	☐	☐	☐	☐	☐
Availability and/or cost of equipment	☐	☐	☐	☐	☐
Staff experience	☐	☐	☐	☐	☐
Staff skills	☐	☐	☐	☐	☐
Recommendations of others	☐	☐	☐	☐	☐
Other *(Please specify below.)*					
_____	☐	☐	☐	☐	☐

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SECTION 3
IMPLEMENTATION OF THE SCHOOL MEALS INITIATIVE: OPERATIONAL PROCEDURES

3.1 Are any schools in your district currently using Enhanced Food-Based Menu Planning, Traditional Food Based Menu Planning, or Other Menu Planning Systems?

☐ Yes

☐ No *(SKIP TO QUESTION 3.9, PAGE 8)*

PART A—FOOD BASED MENU PLANNING

3.2 In planning *lunch* menus, what grade categories do you use? *(List each grade category used for planning lunch menus in your district [K-6, K-12, 9-12, etc.] and then record the total number of schools using a food based menu planning system [Enhanced Food-Based Menu Planning, Traditional Meal Patterns and/or Other Menu Planning Systems.])*

Grade Category/Grouping ▼			Number of Schools ▼
☐☐	–	☐☐	☐☐☐
☐☐	–	☐☐	☐☐☐
☐☐	–	☐☐	☐☐☐
☐☐	–	☐☐	☐☐☐
☐☐	–	☐☐	☐☐☐

3.3 Do the schools in your district publicize (e.g., through handouts or postings) the nutrient content of the meals served? *(Mark [x] one response.)*

☐ Yes, *all* schools disclose nutrient content

☐ Yes, *some* schools disclose nutrient content

☐ No *(SKIP TO QUESTION 3.4, PAGE 7)*

3.3.a How does your district publicize the nutrient content of the meals served? *(Mark [x] all that apply.)*

☐ Informational postings

☐ Handouts

☐ Labels in cafeteria

☐ On T.V. (e.g., public access channels)

☐ On-line

☐ Verbally

☐ Other *(Please specify below.)*

_____

_____

3.3.b To whom is nutrient information publicized? *(Mark [x] all that apply.)*

- ☐ Parents
- ☐ Students
- ☐ Public at large

3.4 Has your State Agency, or someone acting on their behalf (a contractor/consultant), conducted a nutrient analysis of the meals served in any of your schools? *(Mark [x] one box.)*

- ☐ Yes
- ☐ No

3.5 Do you do nutritional analysis of your menus? *(Mark [x] one box.)*

- ☐ Yes *(SKIP TO QUESTION 3.6)*
- ☐ No

3.5.a What steps are you taking to ensure that the meals served in your school district meet the Dietary Guidelines? *(Mark [x] all that apply.)*

- ☐ Offer additional servings of more nutritious foods
- ☐ Substitute more nutritious ingredients and foods
- ☐ Use more nutritious techniques in food preparation
- ☐ No changes have been made
- ☐ Other *(Please specify below.)*

_____

_____

→ *(If you do not do nutritional analysis of your menus, SKIP TO QUESTION 3.8, PAGE 8)*

3.6 ***(If Yes to question 3.5)*** **Which of the following software systems is/are being used to conduct nutrient analysis of your menus?** *(Mark [x] all that apply.)*

- ☐ Bon Appetit Software, Inc.
- ☐ CLM Group Inc.
- ☐ Comalex, Inc.
- ☐ CompuHELP
- ☐ Computer Assisted Food Service (CAFS)
- ☐ Computrition, Inc.
- ☐ Horizon Software (BOSS)
- ☐ Keeping TRAC Software
- ☐ Lunch Byte Systems (NUTRIKIDS)
- ☐ Nutri-Comp Software Systems (RECIPE EXPRESS)
- ☐ PCS Revenue Control Systems, Inc.
- ☐ School House Software
- ☐ School Lunch Computer Services, Inc. (Lunch Cruncher)
- ☐ School Nutrition Accountability Program (SNAP)
- ☐ Superior/Accu-Scan
- ☐ Other *(Please specify below.)*

_____

_____

- ☐ Do not know name of software
- ☐ Analysis done by hand

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3.7 **In assessing the nutritional composition of foods in your menus, are food items weighted on the basis of their relative importance as determined by the number of either actual or planned servings?** *(Mark [x] one box.)*

☐ Yes

☐ No

3.8 **Is your district currently working toward implementing, planning to work toward implementing, or not planning to work toward implementing the Nutrient Standard Menu Planning (NSMP) in elementary or middle/secondary schools?** *(For each school type, mark [x] whether you are working toward implementing NSMP, planning to work toward implementation, or not planning to work toward implementation.)*

	Working ▼	Planning ▼	Not Planning ▼
Elementary schools	☐	☐	☐
Middle/Secondary schools	☐	☐	☐

3.9 **Are any schools in your district using Nutrient Standard Menu Planning (NuMenus) or Assisted Nutrient Standard Menu Planning (Assisted NuMenus)?** *(Mark [x] one box.)*

☐ Yes

☐ No *(SKIP TO SECTION 4, PAGE 14)*

PART B—NUMENU/ ASSISTED NUMENU

3.10 **Which of the following NSMP software systems is being used to conduct nutrient analysis of your menus?** *(Mark [x] all systems that you currently use AND then indicate which is the primary system used.)*

	System currently in use *(Mark [x] all that apply.)* ▼	Primary system *(Mark [x] only one.)* ▼
Bon Appetit Software, Inc.	☐	☐
CLM Group Inc.	☐	☐
Comalex, Inc.	☐	☐
CompuHELP	☐	☐
Computer Assisted Food Service (CAFS)	☐	☐
Computrition, Inc.	☐	☐
Horizon Software (BOSS)	☐	☐
Keeping TRAC Software	☐	☐
Lunch Byte Systems (NUTRIKIDS)	☐	☐
Nutri-Comp Software Systems (RECIPE EXPRESS)	☐	☐
PCS Revenue Control Systems, Inc.	☐	☐
School House Software	☐	☐
School Lunch Computer Services, Inc. (Lunch Cruncher)	☐	☐
School Nutrition Accountability Program (SNAP)	☐	☐
Superior/Accu-Scan	☐	☐
Other *(Please specify below.)*		
	☐	☐
	☐	☐
Do not know name of software	☐	☐
Analysis done by hand	☐	☐

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3.11 What is your overall satisfaction with the performance of the *primary* software you use? *(Mark [x] one box.)*

- ☐ Highly satisfied
- ☐ Satisfied
- ☐ Slightly Dissatisfied
- ☐ Highly Dissatisfied
- ☐ No opinion/don't use software

3.12 In conducting nutrient analysis of your *lunch* menus, what age and/or grade categories do you use? *(List the grade or age groupings in NuMenu/Assisted NuMenu schools in your district and then record the number of schools for each grade and age grouping you listed.)*

Elementary Schools

Grade Grouping (K-6, K-12, etc.)	OR	Age Grouping (3-6, 7-10, etc.)	Number of Schools
☐☐ – ☐☐		☐☐ – ☐☐	☐☐☐
☐☐ – ☐☐		☐☐ – ☐☐	☐☐☐
☐☐ – ☐☐		☐☐ – ☐☐	☐☐☐
☐☐ – ☐☐		☐☐ – ☐☐	☐☐☐
☐☐ – ☐☐		☐☐ – ☐☐	☐☐☐

Middle/Secondary Schools

Grade Grouping (K-6, K-12, etc.)	OR	Age Grouping (3-6, 7-10, etc.)	Number of Schools
☐☐ – ☐☐		☐☐ – ☐☐	☐☐☐
☐☐ – ☐☐		☐☐ – ☐☐	☐☐☐
☐☐ – ☐☐		☐☐ – ☐☐	☐☐☐
☐☐ – ☐☐		☐☐ – ☐☐	☐☐☐
☐☐ – ☐☐		☐☐ – ☐☐	☐☐☐

3.13 In assessing the nutritional composition of foods in your menus, are food items weighted on the basis of their relative importance as determined by the number of either actual or planned servings? *(Mark [x] one box.)*

- ☐ Yes
- ☐ No *(SKIP TO QUESTION 3.15)*

3.14 Are *a la carte* food sales of those food items that are also reimbursable meals excluded from the number of actual or planned servings used in making this calculation? *(Mark [x] one box.)*

- ☐ Yes
- ☐ No

3.15 Has re-analysis of your menus been necessary for any of the following reasons? *(Mark [x] all that apply.)*

- ☐ Due to unavailability of ingredients or foods
- ☐ Due to changes in student preferences
- ☐ Due to cost of ingredients or foods
- ☐ To incrementally move toward nutritional targets
- ☐ To achieve overall nutritional targets
- ☐ Other *(Please specify below.)*

_____

_____

_____

- ☐ Re-analysis of menus has NOT been necessary *(SKIP TO QUESTION 3.17, PAGE 11)*

3.16 How often have any of your menus required re-analysis of their nutritional composition? *(Mark [x] one box.)*

- ☐ Weekly
- ☐ Biweekly
- ☐ Monthly
- ☐ Quarterly
- ☐ Semester
- ☐ Semi-annually
- ☐ Annually

3.17 Do the schools in your district publicize (e.g., through handouts or postings) the nutrient content of the meals served? *(Mark [x] one response.)*

- ☐ Yes; *all* schools disclose nutrient content
- ☐ Yes; *some* schools disclose nutrient content
- ☐ No *(SKIP TO QUESTION 3.18)*

3.17.a How does your district publicize the nutrient content of the meals served? *(Mark [x] all that apply.)*

- ☐ Informational postings
- ☐ Handouts
- ☐ Labels in cafeteria
- ☐ On T.V. (e.g., public access channels)
- ☐ On-line
- ☐ Verbally
- ☐ Other *(Please specify below.)*

3.18 Do you have any schools that use Assisted Nutrient Standard Menu Planning (Assisted NuMenus)? *(Mark [x] one box.)*

- ☐ Yes
- ☐ No *(SKIP TO QUESTION 3.21, PAGE 11)*

3.19 Has your district submitted menus and recipes to your State Agency for approval? *(Mark [x] one box.)*

- ☐ Yes
- ☐ No *(SKIP TO QUESTION 3.19.b)*

3.19.a Were these menus approved in whole or in part? *(Mark [x] one box.)*

- ☐ Yes
- ☐ No

→ *(SKIP TO QUESTION 3.20)*

3.19.b When do you plan to submit this information? *(Record month and year.)*

Month ▼ Year ▼

Date ☐☐ – ☐☐☐☐

3.20 Who is (or will be) conducting nutrient analysis for your district? *(Mark [x] one category.)*

- ☐ State Agency
- ☐ Another school district
- ☐ Private consultant
- ☐ Food service management company
- ☐ Other *(Please specify below.)*

3.21 **Do you offer school breakfasts?** *(Mark [x] one box.)*

☐ Yes

☐ No *(SKIP TO QUESTION 3.27, PAGE 12)*

3.22 **Are you implementing NSMP in your *breakfast* program?** *(Mark [x] one box.)*

☐ Yes

☐ No *(SKIP TO QUESTION 3.27, PAGE 12)*

3.23 **Have you had any difficulty meeting standards for *breakfast* menus for the nutrients listed below? For each nutrient that you have *had difficulty meeting* standards indicate for which age group you have had difficulty meeting standards.** *(For every nutrient you have difficulty meeting breakfast menu standards, indicate all age groups with which you have had difficulty.)*

Nutrient Standards	Difficult to Meet? Yes ▼	No ▼	If Difficult, Age Group in Years *(3-6, 7-10, 11-13, 14+, Other– please specify)* ▼
Total calories	☐	☐	☐☐ – ☐☐
Protein	☐	☐	☐☐ – ☐☐
Calcium	☐	☐	☐☐ – ☐☐
Iron	☐	☐	☐☐ – ☐☐
Vitamin A	☐	☐	☐☐ – ☐☐
Percent of calories from total fat	☐	☐	☐☐ – ☐☐
Percent of calories from saturated fat	☐	☐	☐☐ – ☐☐

3.24 **Have you established target standards for carbohydrate, cholesterol, sodium, or dietary fiber content of *breakfast* menus?** *(Mark [x] one box.)*

☐ Yes

☐ No *(SKIP TO QUESTION 3.27, PAGE 12)*

3.25 **What targets have you established for carbohydrates, cholesterol, sodium and dietary fiber for *breakfast* menus?** *(Record the target for each item. If there is no established target for an item, enter "0".)*

Carbohydrate ☐☐ % of calories

Cholesterol ☐☐☐ milligrams

Sodium ☐☐☐☐ milligrams

Dietary fiber ☐☐ grams

3.26 **Have you had any difficulty meeting these targets?** *(Mark [x] one box.)*

Targets	Difficult to Meet? Yes ▼	No ▼
Percent of calories from carbohydrates	☐	☐
Cholesterol	☐	☐
Sodium	☐	☐
Dietary fiber	☐	☐

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3.27 **Are you implementing NSMP in your *lunch* program?** *(Mark [x] one box.)*

☐ Yes

☐ No *(SKIP TO QUESTION 3.33, PAGE 13)*

3.28 **Have you had any difficulty meeting standards for *lunch* menus (or *combined* breakfast and lunch menu analysis) for the nutrients listed below? For each nutrient that you have *had difficulty meeting* standards indicate for which age group you have had difficulty meeting standards.** *(For every nutrient you have difficulty meeting lunch menu standards, indicate all age groups with which you have difficulty.)*

Nutrient Standards	Difficult to Meet? Yes ▼	No ▼	If Difficult, Age Group in Years *(3-6, 7-10, 11-13, 14+, Other–please specify)* ▼
Total calories	☐	☐	☐☐ – ☐☐
Protein	☐	☐	☐☐ – ☐☐
Calcium	☐	☐	☐☐ – ☐☐
Iron	☐	☐	☐☐ – ☐☐
Vitamin A	☐	☐	☐☐ – ☐☐
Percent of calories from total fat	☐	☐	☐☐ – ☐☐
Percent of calories from saturated fat	☐	☐	☐☐ – ☐☐

3.29 **Have you established target standards for carbohydrate, cholesterol, sodium, or dietary fiber content of *lunch* (or *combined* breakfast and lunch analysis) menus?** *(Mark [x] one box.)*

☐ Yes

☐ No *(SKIP TO QUESTION 3.33, PAGE 13)*

3.30 **What targets have you established for carbohydrates, cholesterol, sodium and dietary fiber for *lunch* (or *combined* breakfast and lunch analysis) menus?** *(Record the target for each item. If there is no established target for an item, enter "0".)*

Carbohydrate ☐☐ % of calories

Cholesterol ☐☐☐ milligrams

Sodium ☐☐☐☐ milligrams

Dietary fiber ☐☐ grams

3.31 **Have you had any difficulty meeting these targets for *lunch* (or *combined* breakfast and lunch analysis) menus?** *(Mark [x] one box.)*

Targets	Difficult to Meet? Yes ▼	No ▼
Percent of calories from carbohydrates	☐	☐
Cholesterol	☐	☐
Sodium	☐	☐
Dietary fiber	☐	☐

(NOTE: IF NSMP IS IMPLEMENTED IN BOTH BREAKFAST AND LUNCH PROGRAMS, CONTINUE. OTHERWISE, SKIP TO QUESTION 3.33, PAGE 14.)

3.32 **Does the nutrient analysis conducted for schools in your school district result in a single analysis that combines breakfast and lunch menus?** *(Mark [x] one box.)*

☐ Yes

☐ No

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3.33 Since implementing NSMP (NuMenus/ Assisted NuMenus) are your meals very different, somewhat different, or is there no difference in the meals you offer? *(Mark [x] one response per menu and school type.)*

	Very Different	Somewhat Different	No Difference	Not Applicable
Breakfast menus				
Elementary school	☐	☐	☐	☐
Middle/Secondary school	☐	☐	☐	☐
Lunch menus				
Elementary school	☐	☐	☐	☐
Middle/Secondary school	☐	☐	☐	☐
Special menus (deli, salad bars, etc.)				
Elementary school	☐	☐	☐	☐
Middle/Secondary school	☐	☐	☐	☐

3.34 Since implementing NSMP, do you and/or your staff spend more time, the same amount of time or less time on planning breakfast and/or lunch menus? *(Mark [x] one response in each row.)*

	More Time	Same Amount of Time	Less Time	Not Applicable
Breakfast	☐	☐	☐	☐
Lunch	☐	☐	☐	☐

3.35 Since implementation of NSMP have *a la carte* sales increased, not changed, or decreased? *(For each type of school, mark [x] the type of change implementation of NSMP has had on* a la carte *sales. If* a la carte *items are not offered, mark [x]* a la carte *not offered.)*

	Increased Sales	No Change	Decreased Sales	*A La Carte* Not Offered
Elementary	☐	☐	☐	☐
Middle/Secondary	☐	☐	☐	☐

3.36 Has implementing NSMP been a significant burden, a minor burden, or not a burden on you and/or your staff? *(Mark [x] one response for each task.)*

Task	Significant Burden	Minor Burden	Not a Burden
Developing standardized recipes	☐	☐	☐
Entering/analyzing *recipes*	☐	☐	☐
Planning menus	☐	☐	☐
Obtaining food production information for weighted nutrient analysis	☐	☐	☐
Entering/analyzing *menus*	☐	☐	☐
Obtaining nutrient information for foods not in the database	☐	☐	☐
Providing specifications for purchased foods	☐	☐	☐
Monitoring foods received to ensure that specifications are met	☐	☐	☐
Training food service staff	☐	☐	☐
Entering product information	☐	☐	☐
Selecting appropriate items from database	☐	☐	☐
Retraining point of service staff to identify reimbursable meals	☐	☐	☐
Educating students to select reimbursable meals	☐	☐	☐
Marketing healthier food choices to students	☐	☐	☐
Other *(Please specify below.)*			
_____	☐	☐	☐
_____	☐	☐	☐

SECTION 4
IMPACT OF THE SCHOOL MEALS INITIATIVE (SMI)

4.1 Since initiating SMI has there been an increase, no change, a decrease or total elimination of the following *menu related* features in your program? (*Mark [x] one response per program feature.*)

Program Feature	Increase ▼	No Change ▼	Decrease ▼	Totally Eliminated ▼	Never Had ▼
Use of menu cycles	☐	☐	☐	☐	☐
Use of centralized menu planning	☐	☐	☐	☐	☐
Use of decentralized menu planning	☐	☐	☐	☐	☐
Availability of self-serve foods/food bars	☐	☐	☐	☐	☐
Availability of *a la carte* in elementary schools	☐	☐	☐	☐	☐
Availability of *a la carte* in middle/secondary schools	☐	☐	☐	☐	☐
Number of menu choices for reimbursable meals	☐	☐	☐	☐	☐
Number of new menu items	☐	☐	☐	☐	☐
Portion sizes by age/ grade level	☐	☐	☐	☐	☐
Opportunity for local cafeteria options	☐	☐	☐	☐	☐
Number of fruits and/or vegetables offered	☐	☐	☐	☐	☐
Variation of menu items among age/grade categories	☐	☐	☐	☐	☐
Marketing of menus	☐	☐	☐	☐	☐
Availability of offer vs. serve in elementary schools	☐	☐	☐	☐	☐
Physical layout of cafeteria	☐	☐	☐	☐	☐
Other *(Please specify below.)*					
_____	☐	☐	☐	☐	☐
_____	☐	☐	☐	☐	☐

4.2 Since initiating SMI, has there been an increase, no change, a decrease or total elimination of the following *recipe or food preparation* features in your program? (*Mark [x] one response per feature.*)

Recipe or Food Preparation Feature	Increase ▼	No Change ▼	Decrease ▼	Totally Eliminated ▼	Never Had ▼
Use of standardized recipes	☐	☐	☐	☐	☐
Use of new USDA recipes	☐	☐	☐	☐	☐
Time devoted to recording food production information	☐	☐	☐	☐	☐
Modification of recipes to improve nutritional content of meals	☐	☐	☐	☐	☐
Modification of preparation methods to improve nutritional content of meals	☐	☐	☐	☐	☐
Purchase of new equipment	☐	☐	☐	☐	☐

4.3 Since initiating SMI, has there been an increase, no change, a decrease or total elimination of the following *food procurement practices* in your program? (*Mark [x] one response per practice.*)

Food Procurement Practices	Increase ▼	No Change ▼	Decrease ▼	Totally Eliminated ▼	Never Had ▼
Purchase of fresh fruits and vegetables	☐	☐	☐	☐	☐
Purchase of prepared foods	☐	☐	☐	☐	☐
Purchase of pre-plated meals from outside vendors	☐	☐	☐	☐	☐
Use of USDA donated commodities	☐	☐	☐	☐	☐
Purchase of low-fat/ reduced-fat foods	☐	☐	☐	☐	☐
Requiring nutrition information from vendors	☐	☐	☐	☐	☐
Use and content of product specification	☐	☐	☐	☐	☐
Use of purchasing cooperatives	☐	☐	☐	☐	☐

4.4 Since implementation of the SMI, has there been an increase, no change, or decrease in your costs/budget in each of the following categories? *(Mark [x] one box per category.)*

Category	Increased Cost ▼	No Change in Costs ▼	Decreased Costs ▼
Food costs	☐	☐	☐
Food preparation costs	☐	☐	☐
Serving costs	☐	☐	☐
Equipment costs	☐	☐	☐
Administrative costs	☐	☐	☐
Total program costs	☐	☐	☐

4.5 Since implementation of the SMI, has there been a positive effect, no change, or a negative effect on program acceptance in each of the following areas? *(Mark [x] one response per area.)*

Area	Positive Effect ▼	No Change ▼	Negative Effect ▼
Program participation	☐	☐	☐
Student acceptance	☐	☐	☐
Parental support	☐	☐	☐
Adult staff acceptance	☐	☐	☐
Overall acceptability of menu choices	☐	☐	☐

4.6 In comparison to how students ate before school lunches were required to comply with the Dietary Guidelines for Americans, have you noticed any changes in the amount of food students throw away (do not eat) at lunchtime? *(Mark [x] one box for each food.)*

Food	Students Waste More ▼	Students Waste Less ▼	No Change ▼	Don't Know ▼
Milk	☐	☐	☐	☐
Main dish/entree	☐	☐	☐	☐
Bread or bread alternate	☐	☐	☐	☐
Salad/raw vegetables	☐	☐	☐	☐
Cooked vegetables (other than french fries)	☐	☐	☐	☐
Fruit	☐	☐	☐	☐
Desserts	☐	☐	☐	☐

CONTINUE TO NEXT PAGE.

4.7 Since implementing the SMI, has the *number of food choices* offered in reimbursable meals increased, not changed, or decreased in the schools in your district? *(For each of the following school types and food categories, please indicate if there has been a change in number of choices since initiating the SMI. Mark [x] only one response per category.)*

Elementary Schools	Choices Increased ▼	No Change ▼	Choices Decreased ▼
Entrees	☐	☐	☐
Fruit	☐	☐	☐
Vegetables	☐	☐	☐
Grain/Bread	☐	☐	☐
Milk	☐	☐	☐
Desserts	☐	☐	☐
Other *(Please specify below.)*			
_____	☐	☐	☐
_____	☐	☐	☐

Middle/Secondary Schools	Choices Increased ▼	No Change ▼	Choices Decreased ▼
Entrees	☐	☐	☐
Fruit	☐	☐	☐
Vegetables	☐	☐	☐
Grain/Bread	☐	☐	☐
Milk	☐	☐	☐
Desserts	☐	☐	☐
Other *(Please specify below.)*			
_____	☐	☐	☐
_____	☐	☐	☐

4.8 Since implementing the SMI, has the *portion size* offered in reimbursable meals increased, not changed, or decreased in the schools in your district? *(For each of the following school types and food categories, please indicate if there has been a change in portion size since initiating the SMI. Mark [x] one response per category.)*

Elementary Schools	Portion Size Increased ▼	No Change ▼	Portion Size Decreased ▼
Entrees	☐	☐	☐
Fruit	☐	☐	☐
Vegetables	☐	☐	☐
Grain/Bread	☐	☐	☐
Milk	☐	☐	☐
Desserts	☐	☐	☐
Other *(Please specify below.)*			
_____	☐	☐	☐
_____	☐	☐	☐

Middle/Secondary Schools	Portion Size Increased ▼	No Change ▼	Portion Size Decreased ▼
Entrees	☐	☐	☐
Fruit	☐	☐	☐
Vegetables	☐	☐	☐
Grain/Bread	☐	☐	☐
Milk	☐	☐	☐
Desserts	☐	☐	☐
Other *(Please specify below.)*			
_____	☐	☐	☐
_____	☐	☐	☐

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4.9 Since implementing the SMI, has the number of *a la carte* items offered at lunch increased, not changed, or decreased in your school district? *(Mark [x] one response per category.)*

Elementary Schools	Items Increased ▼	No Change ▼	Items Decreased ▼	*A La Carte* Not Offered ▼
Entrees	☐	☐	☐	☐
Desserts	☐	☐	☐	☐
Beverages (including milk)	☐	☐	☐	☐
Side dishes	☐	☐	☐	☐
Snacks	☐	☐	☐	☐
Other *(Please specify below.)*				
☐	☐	☐	☐	☐
☐	☐	☐	☐	☐

Middle/ Secondary Schools	Items Increased ▼	No Change ▼	Items Decreased ▼	*A La Carte* Not Offered ▼
Entrees	☐	☐	☐	☐
Desserts	☐	☐	☐	☐
Beverages (including milk)	☐	☐	☐	☐
Side dishes	☐	☐	☐	☐
Snacks	☐	☐	☐	☐
Other *(Please specify below.)*				
☐	☐	☐	☐	☐
☐	☐	☐	☐	☐

4.10 Since implementing SMI, have you had major difficulty, some difficulty, or no difficulty in dealing with the following operational tasks? *(Mark [x] one response per operational task.)*

Operational Tasks	Major Difficulty ▼	Some Difficulty ▼	No Difficulty ▼
Documenting last-minute substitutions	☐	☐	☐
Substituting nutritionally-comparable foods	☐	☐	☐
Defining a reimbursable meal	☐	☐	☐
Implementing offer vs. serve	☐	☐	☐
Serving planned portions	☐	☐	☐
Moving students through the line	☐	☐	☐
Adhering to standardized recipes	☐	☐	☐
Maintaining food production records	☐	☐	☐
Separating *a la carte* and reimbursable sales	☐	☐	☐
Obtaining production information for self-serve bars	☐	☐	☐
Other *(Please specify below.)*			
☐	☐	☐	☐
☐	☐	☐	☐

Section 5
Training And Technical Assistance

5.1 Are you or a member of your staff familiar with the USDA developed materials listed below? For each of the USDA developed materials you, or a member of your staff, are familiar with, did you find the material to be very useful, of some use, or of no use to you in implementing the School Meals Initiative? *(For each USDA developed material that your are familiar with, indicate whether it was very useful, of some use, or no use to you in implementing the School Meals Initiative.)*

	Are You Familiar With?		If Yes, How Useful?		
	Yes ▼	No ▼	Very useful ▼	Of some use ▼	Of no use ▼
Healthy School Meals Training Manual	☐	☐	☐	☐	☐
A Menu Planner for Healthy School Meals	☐	☐	☐	☐	☐
A Tool Kit for Healthy School Meals	☐	☐	☐	☐	☐
Assisted NuMenus Resource Guide	☐	☐	☐	☐	☐
USDA's Great Nutrition Adventure Action Packets	☐	☐	☐	☐	☐
School Lunch Challenge Recipes	☐	☐	☐	☐	☐
Serving it Safe: a Manager's Tool Kit	☐	☐	☐	☐	☐
Choice Plus Food Purchasing Manual Reference Guide	☐	☐	☐	☐	☐
Culinary Training Video	☐	☐	☐	☐	☐

5.2 From which of the following sources have you, or anyone on your staff, received training and/or technical assistance (in-person, printed matter, telephone, or e-mail) within the past two years? For each source of training or technical assistance you have received, did you find the source very useful, of some use, or of no use to you in implementing the School Meals Initiative? *(For each source from which you have received training or technical assistance, indicate whether the training or technical assistance has been very useful, of some use, or of no use to you in implementing the School Meals Initiative.)*

	Received Assistance?		If Yes, How Useful?		
	Yes ▼	No ▼	Very useful ▼	Of some use ▼	Of no use ▼
State Child Nutrition Agency	☐	☐	☐	☐	☐
USDA Food and Nutrition Information Center	☐	☐	☐	☐	☐
Healthy Schools Meals Resource System (including Meal Talk) on WWW	☐	☐	☐	☐	☐
State Nutrition Education Training (NET) program	☐	☐	☐	☐	☐
National Food Service Management Institute (NSFMI)	☐	☐	☐	☐	☐
Cooperative Extension Service	☐	☐	☐	☐	☐
Computer/computer software vendor	☐	☐	☐	☐	☐
Colleges or universities	☐	☐	☐	☐	☐
Professional or trade associations	☐	☐	☐	☐	☐
Private consultants	☐	☐	☐	☐	☐
Private firms in the food industry	☐	☐	☐	☐	☐
Other *(Please specify below.)*					
☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐

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5.3 Topics of special importance to implementation of the School Meals Initiative are listed below. In which of these topics have you and/or your staff received training over the past two years? For each topic in which you received training, did you find the training very useful, of some use, or of no use to you in implementing the School Meals Initiative? *(For each topic on which you have received training, indicate whether the training has been very useful, of some use, or of no use to you in implementing the School Meals Initiative.)*

Topic	Received Training? Yes ▼	Received Training? No ▼	If Yes, How Useful? Very useful ▼	If Yes, How Useful? Of some use ▼	If Yes, How Useful? Of no use ▼
Menu Planning option under School Meals Initiative	☐	☐	☐	☐	☐
Defining reimbursable meals	☐	☐	☐	☐	☐
Use of computer/ computer software	☐	☐	☐	☐	☐
Development of menu cycles	☐	☐	☐	☐	☐
Use of standardized recipes	☐	☐	☐	☐	☐
Implementing offer vs. serve	☐	☐	☐	☐	☐
Controlling portion sizes	☐	☐	☐	☐	☐
Documenting use of substitute foods	☐	☐	☐	☐	☐
Documenting use of leftovers	☐	☐	☐	☐	☐
Marketing your food program	☐	☐	☐	☐	☐
Other *(Please specify below.)*					
☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐

5.4 On which of these topics could you and/or your staff benefit from additional training? *(For each topic listed below, indicate if you or your staff would find additional training beneficial.)*

Topic	Additional Training Beneficial? Yes ▼	Additional Training Beneficial? No ▼
Menu Planning option under School Meals Initiative	☐	☐
Defining reimbursable meals	☐	☐
Use of computer/computer software	☐	☐
Development of menu cycles	☐	☐
Use of standardized recipes	☐	☐
Implementing offer vs. serve	☐	☐
Controlling portion sizes	☐	☐
Documenting use of substitute foods	☐	☐
Documenting use of leftovers	☐	☐
Marketing your food program	☐	☐
Other *(Please specify below.)*		
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

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SECTION 6

OVERALL ASSESSMENT OF SMI

6.1 In general, how do you find the attitude of the staff, students and parents toward the School Meals Initiative? Is their attitude very positive, somewhat positive, neutral, somewhat negative, or very negative? *(Mark [x] one response per category. If you do not have staff in any of the categories, mark [x] Not Applicable.)*

	Very Positive ▼	Somewhat Positive ▼	Neutral ▼	Somewhat Negative ▼	Very Negative ▼	Not Applicable ▼
Administrative Staff	☐	☐	☐	☐	☐	☐
Financial Staff	☐	☐	☐	☐	☐	☐
Kitchen Managers	☐	☐	☐	☐	☐	☐
Cooks	☐	☐	☐	☐	☐	☐
Cashiers	☐	☐	☐	☐	☐	☐
Students	☐	☐	☐	☐	☐	☐
Parents	☐	☐	☐	☐	☐	☐

6.2 As the School Food Authority Director, what is your personal opinion about the School Meals Initiative? *(Mark [x] one box.)*

- ☐ Very positive
- ☐ Somewhat positive
- ☐ Neutral
- ☐ Somewhat negative
- ☐ Very negative
- ☐ Undecided

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PLEASE COMPLETE THE SECTION BELOW.

School District Name ☐☐☐

Thank you for completing the questionnaire.

Please return the completed form in the self-addressed, prepaid envelope provided. The form should be sent to:

The Gallup Organization
ATTN: Mary Beth Olson
300 South 68th Street Place
Lincoln, Nebraska 68510

Attention: Project USDA/School Meals Initiative

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APPENDIX B

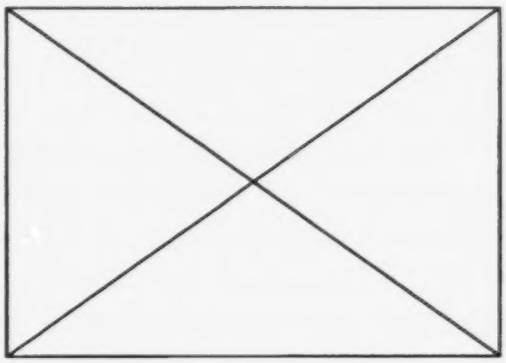
State Child Nutrition Directors Survey

OMB Clearance No. 0584–0485
Expiration date 10/31/2000

SCHOOL MEALS INITIATIVE IMPLEMENTATION STUDY

U.S. Department of Agriculture
Food and Consumer Service

CHILD NUTRITION PROGRAMS: SURVEY OF STATE DIRECTORS



Sponsored by: U.S. Department of Agriculture
Food and Consumer Service
3101 Park Center Drive
Alexandria, Virginia 22302

Contractor: The Gallup Organization
Government & Education Division
1 Church Street, Suite 900
Rockville, Maryland 20850

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General Information

This questionnaire is to be completed by the State Director of Child Nutrition Programs.

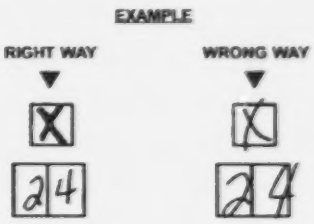
Please answer each question directly on the questionnaire by checking the appropriate box or by writing your response in the space provided. Some factual questions may request information that may not be readily available from office records (e.g., average number of hours). Informed estimates are acceptable for such questions.

We realize that you are very busy; however, we hope that you can complete the questionnaire and return it to *The Gallup Organization* in the prepaid, self-addressed envelope provided as soon as possible. Respondents will be afforded sufficient time to complete and return the questionnaire—30 days to gather the necessary information from other members of agency staff—to the extent this is required. Your cooperation is needed to ensure that the results of this survey are nationally representative, accurate, and timely.

Survey Instructions

Please follow the steps below carefully when completing this survey.

- Use a blue or black ink pen only.
- Do not use ink that soaks through the paper.
- Make solid marks that fit in the response boxes.
- Make no stray marks on the survey.
- To answer the survey questions, please mark the appropriate answer in each box.



Uses of the Data

The data from this survey will be used by federal and state policy makers to address issues regarding the implementation of the School Meals Initiative and related child nutrition programs.

Confidentiality

As a matter of policy, the U.S. Department of Agriculture, Food and Consumer Service, is required to protect the privacy of individuals who participate in surveys. The information provided on this form will be kept strictly confidential. Your responses will be merged with those of other respondents, and the answers you give will never be identified as yours. You may skip any questions you do not wish to answer; however, we hope you answer as many questions as you can.

Questions

If you have any questions, please call the Gallup Project Director, Dr. Sameer Abraham, or the Project Coordinator, Colleen Sullivan, toll-free at 1-888-486-6335 during normal business hours (8:30 a.m.–5:00 p.m. CST).

Thank you very much for your cooperation.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, Room 404-W, Washington, D.C. 20250; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.

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GLOSSARY

Assisted Nutrient Standard Menu Planning (Assisted NuMenus)

Attainment of minimum weekly nutrient levels using approved menu cycles based on nutrient analysis conducted outside of the SFA.

Enhanced Food-Based Menu Planning

Attainment of minimum weekly nutrient levels by offering specific food items in prescribed quantities.

National School Lunch Program (NSLP)

A Federal meal program, established under the National School Lunch Act of 1946, that provides nutritionally balanced, low-cost or free lunches to more than 25 million children each school day in more than 94,000 public and nonprofit private schools and residential child care institutions nationwide.

Nutrient Standard Menu Planning (NuMenus)

Attainment of minimum weekly nutrient levels based on nutrient analysis of all meal items conducted by the SFA.

School Breakfast Program (SBP)

A Federal meal program that provides nutritionally balanced, low-cost or free breakfasts to more than 6 million children each school day in more than 65,000 public and nonprofit private schools and residential child care institutions nationwide.

School Meals Initiative (SMI)

Launched in 1994, the first full-scale reform of the school lunch program since it was established. Its components include: updating the nutritional requirements of school meals; nutrition education training, and technical assistance; improvements in the donated commodity program; and, streamlining program administration.

Standardized Recipe

One that has been tested and adapted for use by a given food service operation and found to produce consistent results and yield every time when the exact procedures are used with the same type of equipment, and the same quantity and quality of ingredients.

Traditional Food-Based Menu Planning

Attainment of minimum weekly nutrient levels by offering specific minimum quantities of food items as prescribed by USDA in regulations issued prior to June 1995.

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SECTION 1
BACKGROUND

1. **How many *public* School Food Authorities (SFAs) within the state are currently participating in child nutrition programs?** *(Record number of SFAs.)*

   Number of public SFAs participating in child nutrition programs ☐☐☐☐

2. **Of the total number of public SFAs within the state participating in child nutrition programs, how many are currently using each of the following menu planning options?** *(Some SFAs can be using more than one menu planning system. The total number of menu planning options in use might therefore exceed the total number of SFAs in the state; see Glossary, page ii. If none, enter "0".)*

   Number of public SFAs currently using:

   Nutrient Standard Menu Planning (NuMenus) ..... ☐☐☐☐

   Assisted Nutrient Standard Menu Planning (Assisted NuMenus) ..... ☐☐☐☐

   Enhanced Food-Based Menu Planning ..... ☐☐☐☐

   Traditional Food-Based Menu Planning ..... ☐☐☐☐

   Other ..... ☐☐☐☐

3. **How many public SFAs within the state requested and received waivers for the use of weighted nutrient analysis?** *(Record number of SFAs. If none, enter "0".)*

   Number of public SFAs ☐☐☐☐

4. **We are interested in learning about the training and education of persons engaged in monitoring and technical assistance in support of the National School Lunch and Breakfast Programs for your Agency.**

   How many full-time equivalent (FTE) workers have degrees or formal training in nutrition or a related field? Please indicate how many FTE workers with formal training or degrees are employed directly by the Agency and how many FTE workers are employed by someone hired by this Agency to monitor National School Lunch and Breakfast Programs. *(Exclude any workers who might be engaged in the storage or distribution of donated commodities or in any other activity not directly related to the administration of Child Nutrition Programs. Record number for each category. If none, enter "0".)*

	Number of FTE staff
Agency Staff	☐☐☐
Contracted Staff	☐☐☐
Individual Consultants	☐☐☐

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SECTION 2
MENU PLANNING OPTIONS

5. What role has your Agency played in assisting public SFAs in the selection and implementation of new menu planning systems during the past two school years (1995–96 and 1996–97 School Years)?

Has your Agency, or someone working on your behalf (contractors), provided public SFAs with:

5a. Assistance in training sessions? *(Mark [x] one box.)*

☐ Yes → What level of assistance was provided during the 1995-96 and 1996-97 school years? *(If none, enter "0".)*

a. ☐☐☐☐ Number of training sessions assisted

b. ☐☐☐☐ Number of public SFAs represented

c. ☐☐☐☐ Number of public SFA staff attending

☐ No

5b. Nutritional expertise either directly or through an outside organization? *(Mark [x] one box.)*

☐ Yes

☐ No

5c. Computer expertise either directly or through an outside organization? *(Mark [x] one box.)*

☐ Yes

☐ No

5d. On-site technical assistance?

☐ Yes → What level of assistance was provided during the 1995-96 and 1996-97 school years? *(If none, enter "0".)*

a. ☐☐☐☐ Number of on-site visits

b. ☐☐☐☐ Number of SFAs visited

☐ No

[If assistance in training sessions or on-site technical assistance is provided by your agency, go to Question 5e., page 3; otherwise, skip to Question 6, page 4.]

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5e. Which of the following topics were treated in the training sessions or on-site assistance provided by your agency? *(Mark [x] one box for each item.)*

	Yes ▼	No ▼
Defining reimbursable meals	☐	☐
Procedures used in counting reimbursable meals	☐	☐
Implementing offer versus serve	☐	☐
Maintaining records of menu substitutions/additions/deletions/leftovers	☐	☐
Maintaining food production records	☐	☐
Portion control	☐	☐
Adherence to standardized recipes	☐	☐
Data entry for menu analysis	☐	☐
Projecting servings for weighted analysis	☐	☐
Use of approved software	☐	☐
Recipe analysis	☐	☐
Use of nutrient database	☐	☐
Updating nutrient database	☐	☐
Age/grade grouping used in menu analysis	☐	☐
Meeting nutrient standards	☐	☐
Gaining student acceptance of the SMI	☐	☐
Gaining parent acceptance of the SMI	☐	☐
Gaining administrators acceptance of the SMI	☐	☐
Obtaining manufacturer's product specifications/nutrient information	☐	☐
Other *(If Yes, please specify below.)*	☐	☐

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SECTION 3
MONITORING SFA COMPLIANCE WITH THE SCHOOL MEALS INITIATIVE (SMI)

6. Has your Agency, or someone acting on your behalf (contractors), provided an Assisted NuMenus system for SFAs in your state? *(Mark [x] one box.)*

- ☐ Yes
- ☐ No *(SKIP TO QUESTION 11)*

7. Who has been principally responsible for development of the system? *(Mark [x] one box.)*

- ☐ State Agency staff
- ☐ Outside consultant
- ☐ Other *(Please specify below.)*

_____

_____

_____

8. Which software was used? *(Please specify below.)*

_____

_____

9. Is the system currently operational? *(Mark [x] one box.)*

- ☐ Yes
- ☐ No

10. How many public SFAs in the state are currently using the system your agency provided? *(Record number. If none, enter "0".)*

Number of public SFAs ☐☐☐☐

11. How many public SFAs have received an SMI compliance review by your Agency, or someone acting on your behalf (contractors), since the start of the 1996-97 School Year? *(Record number. If none, enter "0".)*

Number of public SFAs ☐☐☐☐

12a. How many unique public school sites were reviewed when conducting these SMI reviews? *(Record number of schools. If none, enter "0".)*

Total number of schools reviewed ☐☐☐☐

12b. In conducting these SMI reviews, what was the total number of public school sites reviewed for each of the following types of menu planning systems? *(If an individual school was using more than one menu planning system, include that school in the total count for each of the menu planning systems used.)*

Number of school sites reviewed
(Record number for each category. If none, enter "0".)

Nutrient Standard Menu Planning (NuMenus) ..... ☐☐☐☐

Assisted Nutrient Standard Menu Planning (Assisted NuMenus) ..... ☐☐☐☐

Enhanced Food-Based Menu Planning ..... ☐☐☐☐

Traditional Food-Based Menu Planning ..... ☐☐☐☐

Other ..... ☐☐☐☐

13. How many public SFAs required corrective action plans as a result of these SMI reviews? *(Record number. If none, enter "0".)*

Number of public SFAs ☐☐☐☐

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14. On the basis of your experience in conducting SMI reviews, what is the average number of State Agency or contractor person-hours that were required to conduct an individual school site review in each of the following situations? Include all time devoted to SMI review-nutrient analysis (whether on-site or off-site), on-site observation, travel, etc. *(Please record the AVERAGE number of hours required to conduct a site review for each type of school.)*

Planning System Used	School that serves lunch only *(Record average hours.)*	School that serves both breakfast and lunch *(Record average hours.)*
Nutrient Standard Menu Planning (NuMenus)		
Assisted Nutrient Standard Menu Planning (Assisted NuMenus)		
Enhanced Food-Based Menu Planning		
Traditional Food-Based Menu Planning		

15. Prototype review forms, developed by the SMI Monitoring Task Force, were made available to you in the 1997–98 School Year. Have you made use of these forms, in whole or in part? *(Mark [x] one box.)*

- ☐ Yes; they were used as provided
- ☐ Yes; they were used with minor changes
- ☐ Yes; they were used with major changes
- ☐ No; they were not used

16. What changes in the forms, instructions, and guidance to conducting SMI reviews do you suggest? *(Please specify below.)*

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17. How do you rate the problems, if any, encountered by public SFAs using a *food-based menu planning system* in implementing the SMI? *(Mark [x] one box for each item.)*

Potential Problems Encountered	Not a Problem ▼	Minor Problem ▼	Major Problem ▼	Not Applicable ▼
Defining reimbursable meals	☐	☐	☐	☐
Counting reimbursable meals	☐	☐	☐	☐
Implementing offer versus serve	☐	☐	☐	☐
Maintaining records of menu substitution/additions/deletions/leftovers	☐	☐	☐	☐
Maintaining food production records	☐	☐	☐	☐
Controlling portions	☐	☐	☐	☐
Adhering to standardized recipes	☐	☐	☐	☐
Age/grade groupings for menu analysis	☐	☐	☐	☐
Meeting nutrient standards	☐	☐	☐	☐
Gaining student acceptance of the SMI	☐	☐	☐	☐
Gaining parent acceptance of the SMI	☐	☐	☐	☐
Gaining administration acceptance of the SMI	☐	☐	☐	☐
Obtaining manufacturer's product specifications/nutrient information	☐	☐	☐	☐

18. How do you rate the problems, if any, encountered by public SFAs using *Nutrient Standard Menu Planning (NuMenus)* or *Assisted Nutrient Standard Menu Planning (Assisted NuMenus)* in implementing the SMI? *(Mark [x] one box for each item.)*

Potential Problems Encountered	Not a Problem ▼	Minor Problem ▼	Major Problem ▼	Not Applicable ▼
Defining reimbursable meals	☐	☐	☐	☐
Counting reimbursable meals	☐	☐	☐	☐
Implementing offer versus serve	☐	☐	☐	☐
Maintaining records of menu substitution/additions/deletions/leftovers	☐	☐	☐	☐
Maintaining food production records	☐	☐	☐	☐
Controlling portions	☐	☐	☐	☐
Adhering to standardized recipes	☐	☐	☐	☐
Data entry for menu analysis	☐	☐	☐	☐
Projecting servings for weighted analysis	☐	☐	☐	☐
Use of approved software	☐	☐	☐	☐
Recipe analysis	☐	☐	☐	☐
Use of nutrient database	☐	☐	☐	☐
Updating nutrient database	☐	☐	☐	☐
Age/grade groupings for menu analysis	☐	☐	☐	☐
Meeting nutrient standards	☐	☐	☐	☐
Gaining student acceptance of the SMI	☐	☐	☐	☐
Gaining parent acceptance of the SMI	☐	☐	☐	☐
Gaining administration acceptance of the SMI	☐	☐	☐	☐
Obtaining manufacturer's product specifications/ nutrient information	☐	☐	☐	☐

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19. How do you rate the problems, if any, encountered by your Agency in monitoring public SFA implementation of the SMI? *(Mark [x] one box for each item.)*

Problems Encountered	Not a Problem ▼	Minor Problem ▼	Major Problem ▼	Not Applicable ▼
Incomplete/missing menus	☐	☐	☐	☐
Incomplete/missing production records including grades/portion sizes	☐	☐	☐	☐
Missing standardized recipes	☐	☐	☐	☐
Missing manufacturer's product specifications/ nutrition information of processed foods	☐	☐	☐	☐
Missing estimates of *a la carte* sales and adult meals	☐	☐	☐	☐
Incomplete records of menu substitution/ additions/deletions/leftovers	☐	☐	☐	☐
Missing printouts of nutrient analyses	☐	☐	☐	☐
Determining which menu planning system is being used	☐	☐	☐	☐
Defining reimbursable meals	☐	☐	☐	☐

Other *(Please specify below.)*	Minor Problem ▼	Major Problem ▼
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐
☐	☐	☐

20. How do you rate the training materials and technical assistance provided by the USDA to public SFAs? *(Mark [x] one box.)*

- ☐ Excellent
- ☐ Very good
- ☐ Adequate
- ☐ Less than adequate
- ☐ Poor

21. How do you rate the training materials and technical assistance provided by the USDA to State Agencies? *(Mark [x] one box.)*

- ☐ Excellent
- ☐ Very good
- ☐ Adequate
- ☐ Less than adequate
- ☐ Poor

22. Do you find anything lacking in the training provided by the USDA? *(Mark [x] one box.)*

- ☐ No; nothing is lacking in the training
- ☐ Yes; the training lacks *(Please specify below in as much detail as possible.)*

23. ***Please complete the section below.***

State

Name of State Agency

Name of Respondent

Last First

Title

Address

City

State Zip Code

Telephone – – ext.

Fax – –

E-mail address

COMMENTS:

Thank you for completing the questionnaire.

Please return the completed form in the self-addressed, prepaid envelope provided. The form should be sent to:

The Gallup Organization
ATTN: Mary Beth Olson
300 South 68th Street Place
Lincoln, Nebraska 68510

Attention: Project USDA/School Meals Initiative

U.S. Department of Education
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